

10/089148
JC05 Rec'd PCT/PTO 27 MAR 2002

TRANSMITTAL LETTER TO THE UNITED STATES

ATTORNEY'S DOCKET NUMBER 50792

DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

INTERNATIONAL APPLICATION NO. PCT/EP00/09744 INTERNATIONAL FILING DATE 5 October 2000 PRIORITY DATE CLAIMED 6 October 1999

TITLE OF INVENTION: NOVEL BENZYL AMIDOXIME DERIVATIVES, INTERMEDIATE PRODUCTS AND METHOD FOR THEIR PRODUCTION AND USE AS FUNGICIDES

APPLICANT(S) FOR DO/EO/US Jochim RHEINHEIMER, Karl EICKEN, Ingo ROSE, Thomas GROTE, Eberhard AMMERMANN, John-Bryan SPEAKMAN, Siegfried STRATHMANN, Gisela LORENZ

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. /X/ This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.
2. // This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.
3. /X/ This express request to begin national examination procedures (35 U.S.C.371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. /x/ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. /X/ A copy of the International Application as filed (35 U.S.C. 371(c)(2)).
 - a./X/ is transmitted herewith (required only if not transmitted by the International Bureau).
 - b.// has been transmitted by the International Bureau.
 - c.// is not required, as the application was filed in the United States Receiving Office (RO/USO).
6. /X/ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. /X/ / Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)).
 - a./X/ / are transmitted herewith (required only if not transmitted by the International Bureau).
 - b.// have been transmitted by the International Bureau.
 - c.// have not been made; however, the time limit for making such amendments has NOT expired.
 - d.// have not been made and will not be made.
8. /X/ / A translation of the amendments to the claims under PCT Article 19(35 U.S.C. 371(c)(3)).
9. /X/ / An oath or declaration of the inventor(s)(35 U.S.C. 171(c)(4)).
- 10.// A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern other document(s) or information included:

- 11.// / An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. /X/ / An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. /X/ / A FIRST preliminary amendment.
// A SECOND or SUBSEQUENT preliminary amendment.
- 14.// / A substitute specification.
- 15.// / A change of power of attorney and/or address letter.
- 16./x/ / Other items or information.
International Search Report
International Preliminary Examination Report

10/089148
JC13 Rec'd PCT/PTO 27 MAR 2002

U.S. Appln. No. (If Known) INTERNATIONAL APPLN. NO.
PCT/EP00/09744

ATTORNEY'S DOCKET NO.
50726

	<u>CALCULATIONS</u>	<u>PTO USE ONLY</u>
17. <input checked="" type="checkbox"/> The following fees are submitted BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5)): Search Report has been prepared by the EPO or JPO.....	\$890.00	
International preliminary examination fee paid to USPTO (37 CFR 1.482).....\$710.00		
No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)).....\$740.00		
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO\$ 1,040.00		
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied pro -visions of PCT Article 33(2)-(4).....\$100.00		

ENTER APPROPRIATE BASIC FEE AMOUNT = \$ 890.00

Surcharge of \$130.00 for furnishing the oath or declaration
later than 1/20/30 months from the earliest
claimed priority date (37 CFR 1.492(e)).

<u>Claims</u>	<u>Number Filed</u>	<u>Number Extra</u>	<u>Rate</u>	
Total Claims	20	-20	X\$18.	
Indep. Claims	1	-3	X\$84.	
Multiple dependent claim(s)(if applicable)			+280.	
TOTAL OF ABOVE CALCULATION		=	890.	

Reduction of 1/2 for filing by small entity, if applicable.
Verified Small Entity statement must also be filed
(Note 37 CFR 1.9, 1.27, 1.28).

	<u>SUBTOTAL</u>	=	<u>890.</u>	
Processing fee of \$130. for furnishing the English translation later than 1/20/30 months from the earliest claimed priority date (37 CFR 1.492(f)).	+			
TOTAL NATIONAL FEE		=	890.	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) \$40.00 per property	=		40.	
TOTAL FEES ENCLOSED		=	\$ 930.00	
Amount to be refunded: \$				
Charged \$				

- a./X/ A check in the amount of \$ 930.00 to cover the above fees is enclosed.
- b./ / Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.
- c./X/ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 11-0345. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:
KEIL & WEINKAUF
1101 Connecticut Ave., N.W.
Washington, D. C. 20036


SIGNATURE

Herbert B. Keil
NAME
Registration No. 18,967

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of)
RHEINHEIMER et al.) BOX PCT
)
International Application)
PCT/EP 00/09744)
)
Filed: October 5, 2000)
)

For: NOVEL BENZYL AMIDOXIME DERIVATIVES, INTERMEDIATE PRODUCTS AND
METHOD FOR THEIR PRODUCTION AND USE AS FUNGICIDES

PRELIMINARY AMENDMENT

Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Sir:

Prior to examination, kindly amend the above-identified application as follows:

IN THE CLAIMS

Kindly amend the claims as shown on the attached sheets.

R E M A R K S

The claims were amended in the preliminary examination. The claims have been
amended further to eliminate multiple dependency and to place them in better form for U.S.
filing. No new matter is included.

A clean copy of the claims is attached.

Favorable action is solicited.

Respectfully submitted,

KEIL & WEINKAUF



Herbert B. Keil
Reg. No. 18,967

1101 Connecticut Ave., N.W.
Washington, D.C. 20036

(202)659-0100

4. A benzamidoxime of the formula I as claimed in claim 1 where Y is a carbon.

5. A benzamidoxime of the formula I as claimed in claim 1 where R_n¹ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy.

10 6. A benzamidoxime of the formula I as claimed in claim 1 where R² is phenyl-C₁-C₆-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the phenyl ring, or

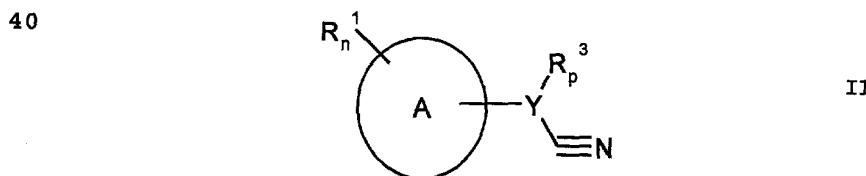
15 is thienyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the thienyl ring, or

20 is pyrazolyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the pyrazole ring.

25 7. A benzamidoxime of the formula I as claimed in claim 1 where R_p³ are one or two identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy.

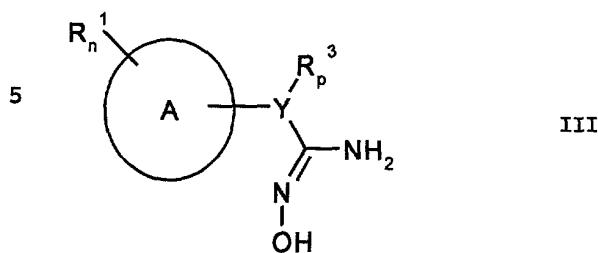
30 13. The use of benzamidoxime derivatives of the formula I as claimed in claim 1 for controlling harmful fungi.

35 14. A process for preparing the benzamidoxime derivatives of the formula I as claimed in claim 1, which comprise reacting benzonitriles of the formula II

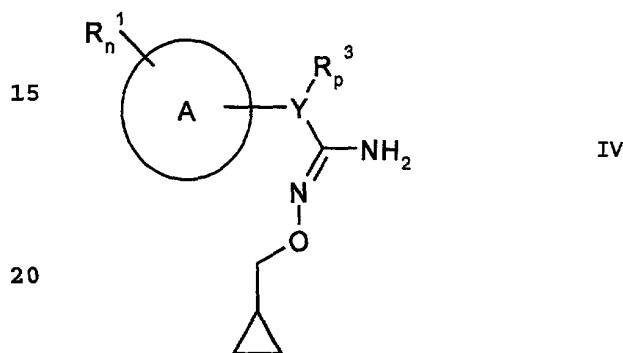


45 45 with hydroxylamine or salts thereof in aqueous solution, preferably at a pH greater than 8, to give benzamidoximes of

the formula III



10 which are then alkylated using a cyclopropylmethyl halide to give benzamidoximes of the formula IV



25 which are subsequently converted, using an appropriate acyl halide, into benzamidoxime derivatives of the formula I.

15. An agrochemical composition, comprising a fungicidally effective amount of at least one benzamidoxime derivative of the formula I as claimed in claim 1 and, if appropriate, agriculturally utilizable auxiliaries or additives.

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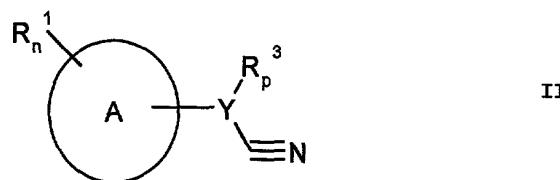
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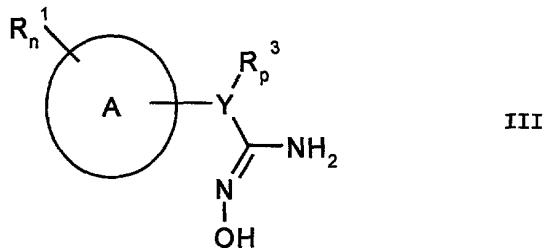
4. A benzamidoxime of the formula I as claimed in claim 1 [or 2] where Y is a carbon.
5. A benzamidoxime of the formula I as claimed in claim 1 [any of claims 1 - 3] where R_n¹ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy.
- 10 6. A benzamidoxime of the formula I as claimed in claim 1 [any of claims 1 - 4] where
 - R² is phenyl-C₁-C₆-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the phenyl ring, or
 - 15 is thienyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the thienyl ring, or
 - 20 is pyrazolyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the pyrazole ring.
- 25 7. A benzamidoxime of the formula I as claimed in claim 1 [any of claims 1 - 5] where R_p³ are one or two identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy.
- 30 35 13. The use of benzamidoxime derivatives of the formula I as claimed in claim 1 [claims 1-9] for controlling harmful fungi.
- 40 14. A process for preparing the benzamidoxime derivatives of the formula I as claimed in claim 1 [any of claims 1-9], which comprise reacting benzonitriles of the formula II

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with hydroxylamine or salts thereof in aqueous solution, preferably at a pH greater than 8, to give benzamidoximes of the formula III

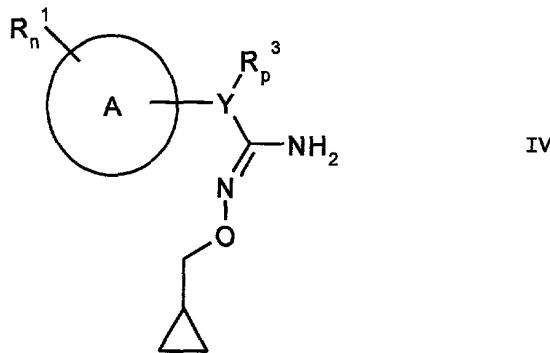
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which are then alkylated using a cyclopropylmethyl halide to give benzamidoximes of the formula IV

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which are subsequently converted, using an appropriate acyl halide, into benzamidoxime derivatives of the formula I.

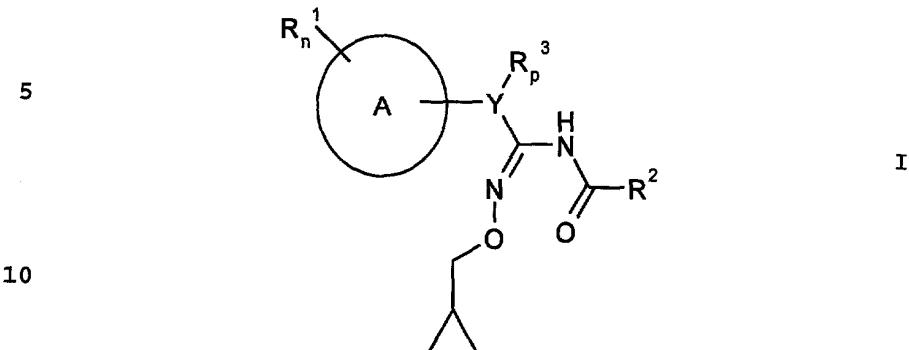
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15. An agrochemical composition, comprising a fungicidally effective amount of at least one benzamidoxime derivative of the formula I as claimed in claim 1 [claims 1 - 9] and, if appropriate, agriculturally utilizable auxiliaries or additives.

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1. A benzamidoxime derivative of the formula I



15 where:

A is an aryl or hetaryl radical from the group consisting of phenyl, pyridyl and thienyl;

20 Y is a straight-chain or branched C₁-C₄-alkylene group, where one carbon can be replaced by oxygen, nitrogen or sulfur or by a cyclopropyl group;

25 R_n¹ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy;

30 R² is phenyl-C₁-C₆-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the phenyl ring, or

35 is thienyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the thienyl ring, or

40 is pyrazolyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the pyrazole ring,

45 R_p³ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-

alkylthio, C₁-C₄-alkoxyalkoxy, C₁-C₆-alkylcarbonyl;

n is 0-5;

5 p is, depending on the number of free valencies, 0-4.

2. A benzamidoxime of the formula I as claimed in claim 1 where A is phenyl.

10 3. A benzamidoxime of the formula I as claimed in claim 1 where A is pyridyl.

4. A benzamidoxime of the formula I as claimed in claim 1 where Y is a carbon.

15

5. A benzamidoxime of the formula I as claimed in claim 1 where R_n¹ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy.

20 6. A benzamidoxime of the formula I as claimed in claim 1 where

25

R² is phenyl-C₁-C₆-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the phenyl ring, or

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is thienyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the thienyl ring, or

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is pyrazolyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the pyrazole ring.

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7. A benzamidoxime of the formula I as claimed in claim 1 where R_p³ are one or two identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy.

8. A benzamidoxime of the formula I as claimed in claim 7 where R_p³ are hydrogen or C₁-C₄-alkyl.

9. A benzamidoxime of the formula I as claimed in claim 1 where:

5

A is an aryl or hetaryl radical from the group consisting of phenyl, pyridyl and thiienyl;

10

Y is a carbon;

15

R_n¹ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy;

20

R² is phenyl-C₁-C₆-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the phenyl ring, or

25

is thiienyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the thiienyl ring, or

30

is pyrazolyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the pyrazole ring,

35

R_p³ are one or two identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy;

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n is 0-5;

p is 0-2.

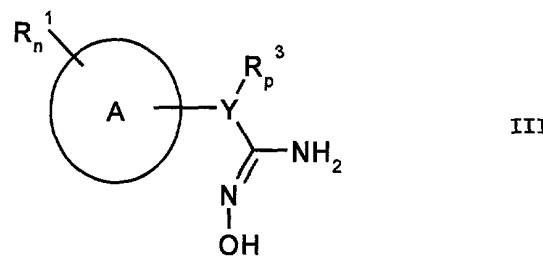
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p is 0-2.

10. The use of amidoximes of the formula III

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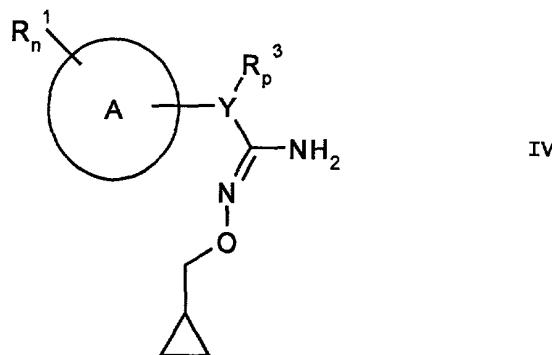
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10 where R_n^1 and R_p^3 are as defined in claim 1, for preparing amidoxime derivatives of the formula I.

11. An amidoxime derivative of the formula IV

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25 where R_n^1 and R_p^3 are as defined in claim 1.

12. The use of compounds of the formula IV as claimed in claim 11 for preparing benzamidoxime derivatives of the formula I.

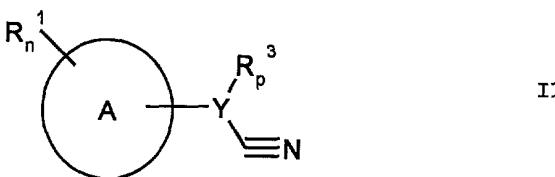
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13. The use of the benzamidoxime derivatives of the formula I as claimed in claim 1 for controlling harmful fungi.

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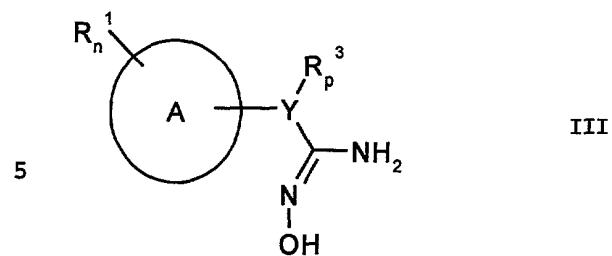
14. A process for preparing the benzamidoxime derivatives of the formula I as claimed in claim 1, which comprises reacting benzonitriles of the formula II

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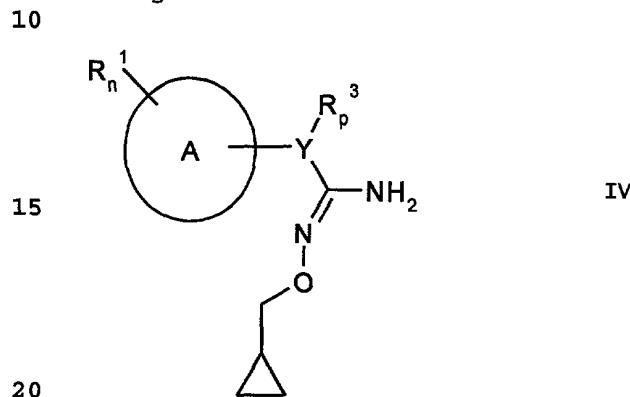


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with hydroxylamine or salts thereof in aqueous solution, preferably at a pH greater than 8, to give benzamidoximes of the formula III



which are then alkylated using a cyclopropylmethyl halide to give benzamidoximes of the formula IV



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which are subsequently converted, using an appropriate acyl halide, into benzamidoxime derivatives of the formula I.

25

15. An agrochemical composition, comprising a fungicidally effective amount of at least one benzamidoxime derivative of the formula I as claimed in claim 1 and, if appropriate, agriculturally utilizable auxiliaries or additives.

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16. A method for controlling harmful fungi, which comprises treating the harmful fungi, their habitat or the plants, areas, materials or spaces to be kept free from them with a fungicidally effective amount of a compound of the formula I or a fungicidal composition comprising a benzamidoxime derivative of the formula I as claimed in claim 16.

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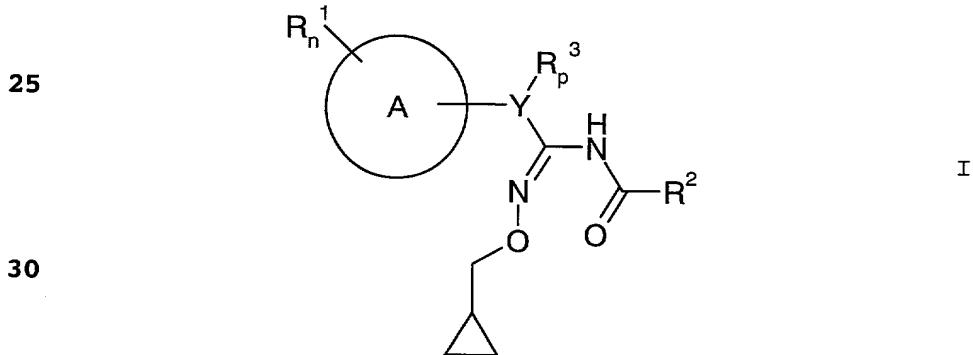
Novel benzyl amidoxime derivatives, intermediate products and method for their production and use as fungicides

5 The present invention relates to novel benzamidoxime derivatives, to processes and intermediates for their preparation and to their use as fungicides.

JP 10-95771 describes, inter alia, fungicidal benzamidoximes; 10 however, these compounds are, with respect to their fungicidal activity and their biological properties, not entirely satisfactory.

It is an object of the present invention to provide novel 15 benzamidoxime derivatives having improved biological properties and increased activity, in particular also at low application rates.

We have found that this object is achieved by the benzamidoxime 20 derivatives of the formula I



35 where:

A is an aryl or hetaryl radical from the group consisting of phenyl, pyridyl and thiienyl;

40 Y is a straight-chain or branched C₁-C₄-alkylene group, where one carbon can be replaced by oxygen, nitrogen or sulfur or by a cyclopropyl group;

R_n^1 are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy, C_1 - C_4 -alkylthio, C_1 - C_4 -alkoxyalkoxy;

5

R^2 is phenyl- C_1 - C_6 -alkyl, which may carry one or more substituents selected from the group consisting of halogen, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkoxy and C_1 - C_4 -haloalkoxy on the phenyl ring, or

10

is thienyl- C_1 - C_4 -alkyl, which may carry one or more substituents selected from the group consisting of halogen, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkoxy or C_1 - C_4 -haloalkoxy and the thienyl ring, or

15

is pyrazolyl- C_1 - C_4 -alkyl, which may carry one or more substituents selected from the group consisting of halogen, C_1 - C_4 -alkyl, C_1 - C_4 -haloalkyl, C_1 - C_4 -alkoxy and C_1 - C_4 -haloalkoxy on the pyrazole ring,

20

R_p^3 are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C_1 - C_6 -alkyl, C_1 - C_6 -alkoxy, C_1 - C_4 -haloalkyl, C_1 - C_4 -haloalkoxy, C_1 - C_4 -alkylthio, C_1 - C_4 -alkoxyalkoxy, C_1 - C_6 -alkylcarbonyl;

25

n is 0, 1, 2, 3, 4 or 5;

p is, depending on the number of free valencies, 0, 1, 2, 3, 4,

30 and their environmentally compatible and agriculturally utilizable salts.

The integers n and p determine the number of substituents R^1 and R^3 , respectively. If n = 0, then R^1 is hydrogen. If p = 0, then R^3 35 is hydrogen.

In the definition of the radicals given in the formula I, the terms mentioned are collective terms for a group of compounds.

40 Halogen is in each case fluorine, bromine, chlorine or iodine, in particular fluorine or chlorine.

Other meanings are, for example:

45

- C_1-C_6 -alkyl: methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylpropyl, 2-methylpropyl or 1,1-dimethylethyl, in particular C_1-C_4 -alkyl, and also methyl or ethyl;
- 5 - C_1-C_6 -haloalkyl: a C_1-C_6 -alkyl radical as mentioned above which is partially or fully substituted by fluorine, chlorine, bromine and/or iodine, i.e., for example, chloromethyl, dichloromethyl, trichloromethyl, fluoromethyl, difluoromethyl, trifluoromethyl, chlorofluoromethyl, 10 dichlorofluoromethyl, chlorodifluoromethyl, 2-fluoroethyl, 2-chloroethyl, 2-bromoethyl, 2-iodoethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 2-chloro-2-fluoroethyl, 2-chloro-2,2-difluoroethyl, 2,2-dichloro-2-fluoroethyl, 15 2,2,2-trichloroethyl, pentafluoroethyl, 2-fluoropropyl, 3-fluoropropyl, 2,2-difluoropropyl, 2,3-difluoropropyl, 2-chloropropyl, 3-chloropropyl, 2,3-dichloropropyl, 2-bromopropyl, 3-bromopropyl, 3,3,3-trifluoropropyl, 3,3,3-trichloropropyl, 2,2,3,3,3-pentafluoropropyl, heptafluoropropyl, 1-(fluoromethyl)-2-fluoroethyl, 20 1-(chloromethyl)-2-chloroethyl, 1-(bromomethyl)-2-bromoethyl, 4-fluorobutyl, 4-chlorobutyl, 4-bromobutyl or nonafluorobutyl, in particular trifluoromethyl;
- C_1-C_4 -alkylene: a straight-chain or branched carbon chain, such as, for example, $-CH_2-$, $-CH_2-CH_2-$, $-CH(CH_3)-$, 25 $-CH_2-CH(CH_3)-$, $CH(CH_3)-CH_2-$, $CH_2-CH_2-CH_2-$, $-CH_2-CH(CH_3)-CH_2-$;
- C_1-C_4 -alkylene where one carbon can be replaced by oxygen, sulfur or nitrogen: a C_1-C_4 -alkylene as mentioned above where 30 any carbon can be replaced by a heteroatom X (X=O, S, NH) such as, for example, $-X-CH_2-$, $-CH_2-X-$, $-X-CH_2-CH_2-$, $-CH(CH_3)-X-$, $-X-CH_2-CH(CH_3)-$, $CH(CH_3)-CH_2-X-$, $-X-CH_2-CH_2-CH_2-$, $-CH_2-CH(CH_3)-CH_2-X-$;
- 35 - C_1-C_4 -alkylene where a carbon can be replaced by an unsubstituted or R^3_p -substituted cyclopropyl group (cPr): a C_1-C_4 -alkylene as mentioned above where any carbon can be replaced by a heteroatom X (X=O, S, NH), such as, for example, $-cPr-$, $-cPr-CH_2-$, $-CH_2-cPr-$, $-cPr-CH_2-CH_2-$, 40 $-CH(CH_3)-cPr-$, $-cPr-CH_2-CH(CH_3)-$, $CH(CH_3)-CH_2-cPr-$, $-cPr-CH_2-CH_2-CH_2-$, $-CH_2-CH(CH_3)-CH_2-cPr-$;
- C_1-C_6 -alkoxy: methoxy, ethoxy, n-propoxy, 1-methylethoxy, n-butoxy, 1-methylpropoxy, 2-methylpropoxy or 45 1,1-dimethylethoxy, in particular C_1-C_4 -alkoxy, and also methoxy or ethoxy;

- C_1-C_4 -haloalkoxy: a C_1-C_4 -alkoxy radical as mentioned above which is partially or fully substituted by fluorine, chlorine, bromine and/or iodine, i.e. for example chloromethoxy, dichloromethoxy, trichloromethoxy, fluoromethoxy, difluoromethoxy, trifluoromethoxy, chlorofluoromethoxy, dichlorofluoromethoxy, chlorodifluoromethoxy, 2-fluoroethoxy, 2-chloroethoxy, 2-bromoethoxy, 2-iodoethoxy, 2,2-difluoroethoxy, 2,2,2-trifluoroethoxy, 2-chloro-2-fluoroethoxy, 2-chloro-2,2-difluoroethoxy, 2,2-dichloro-2-fluoroethoxy, 2,2,2-trichloroethoxy, pentafluoroethoxy, 2-fluoropropoxy, 3-fluoropropoxy, 2,2-difluoropropoxy, 2,3-difluoropropoxy, 2-chloropropoxy, 3-chloropropoxy, 2,3-dichloropropoxy, 2-bromopropoxy, 3-bromopropoxy, 3,3,3-trifluoropropoxy, 3,3,3-trichloropropoxy, 2,2,3,3,3-pentafluoropropoxy, heptafluoropropoxy, 1-(fluoromethyl)-2-fluoroethoxy, 1-(chloromethyl)-2-chloroethoxy, 1-(bromomethyl)-2-bromoethoxy, 4-fluorobutoxy, 4-chlorobutoxy, 4-bromobutoxy or nonafluorobutoxy, in particular difluoromethoxy;
- phenyl- C_1-C_6 -alkyl: for example benzyl, 1-phenylethyl, 2-phenylethyl, 1-phenylprop-1-yl, 2-phenylprop-1-yl, 3-phenylprop-1-yl, 1-(phenylmethyl)eth-1-yl, 1-(phenylmethyl)-1-(methyl)eth-1-yl or 1-(phenylmethyl)prop-1-yl, in particular benzyl or 2-phenylethyl;
- thienyl- C_1-C_4 -alkyl: for example 2-thienylmethyl, 3-thienylmethyl, 2-thienylethyl, 2-thienylprop-1-yl or 3-thienylprop-1-yl;
- pyrazolyl- C_1-C_4 -alkyl: for example 1-pyrazolylmethyl, 2-pyrazolylmethyl, 3-pyrazolylmethyl, 2-pyrazolylethyl, 2-pyrazolylprop-1-yl or 3-pyrazolylprop-1-yl;
- heteroaryl: an aromatic 5- or 6-membered heterocyclic ring which contains one to four identical or different heteroatoms selected from the following group: oxygen, sulfur or nitrogen, and which may be attached to the group Y via a carbon or a heteroatom; for example pyridyl, pyrrolyl, pyrimidinyl, imidazolyl, pyrazolyl, thienyl, oxazinyl, furanyl, oxazolyl, imidoxazolyl;

- aryl: an aromatic carbocyclic, mono- or bicyclic ring having 6 - 14 carbon atoms, such as, for example, phenyl or naphthyl; in particular phenyl.

5 Compounds of the formula I in which A is a phenyl group and n is 1, 2 or 3 have generally been found to be particularly effective. R¹ is here preferably fluorine, chlorine, methyl, methoxy or trifluoromethyl.

10 If A is a phenyl group, the substituents R¹_n preferably have the following meanings: 2,6-dichloro; 2-chloro-6-fluoro; 2,6-difluoro; 2-chloro-5,6-difluoro; 2-chloro-6-trifluoromethyl; 2-fluoro-6-trifluoromethyl; 2-bromo-6-trifluoromethyl; 2-iodo-6-trifluoromethyl; 2,6-dibromo; 2-bromo-6-fluoro;

15 2-bromo-6-chloro; 2-chloro-6-trifluoromethoxy; 2-fluoro-6-trifluoromethoxy; 2-chloro-6-difluoromethoxy; 2-difluoromethoxy-6-fluoro; 2,3-dichloro-6-difluoromethoxy; 2,3-difluoro-6-difluoromethoxy; 2,6-bis(difluoromethoxy); 2,6-bis(trifluoromethoxy); 2,6-bis(trifluoromethyl); 2-bromo;

20 2-chloro; 2-fluoro; 3-bromo; 3-chloro; 3-fluoro; 4-bromo; 4-chloro; 4-fluoro; 4-methoxy; 2-chloro-6-methylthio; 2,3-difluoro-6-methylthio; 2,4-dichloro; 3,5-dichloro; 2,3,6-trichloro; 2,3,6-trifluoro; 2,3,4,5,6-pentafluoro; 2-fluoro-6-methyl; 2-chloro-6-methyl.

25 The group R² is preferably phenylmethyl; (4-chlorophenyl)methyl; (4-fluorophenyl)methyl; (4-methylphenyl)methyl; (3-methylphenyl)methyl; (4-trifluoromethylphenyl)methyl; (4-methoxyphenyl)methyl; (2-thienyl)methyl.

30 Y is, in particular, a straight-chain or branched C₁-C₃-alkylene chain, where one carbon can be replaced by oxygen or sulfur or an imino group (-NH-) or alkylimino group (-N(alkyl)-).

35 Preference is given to compounds of the formula I in which:

A is an aryl or hetaryl radical from the group consisting of phenyl, pyridyl and thienyl;

40 Y is a carbon;

R_n¹ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy,

45 C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy;

5 R² is phenyl-C₁-C₆-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the phenyl ring, or

10 5 is thiienyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the thiienyl ring, or

15 10 is pyrazolyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the pyrazole ring,

15 R_p³ are hydrogen or C₁-C₄-alkyl;

n is 0-5;

20 p is 0-2.

Particular preference is given to compounds of the formula I where:

25 A is phenyl;

Y is a carbon;

30 R_n¹ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy;

35 R² is phenylmethyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the phenyl ring;

40 R_p³ is hydrogen or methyl;

n is 0-5;

p is 0-1.

45 Particular preference is given to compounds of the formula I in which R¹ and R² have the meanings listed in Table 1 below.

Table 1:

No. A	R ¹ _n	R ²	Y-R ³ _p	
5	1) phenyl	2,6-dichloro	phenylmethyl	-CH ₂ -
	2) phenyl	2-chloro-6-fluoro	phenylmethyl	-CH ₂ -
	3) phenyl	2,6-difluoro	phenylmethyl	-CH ₂ -
	4) phenyl	2-chloro-5,6-difluoro	phenylmethyl	-CH ₂ -
10	5) phenyl		phenylmethyl	-CH ₂ -
	6) phenyl	2-chloro-6-trifluoromethyl	phenylmethyl	-CH ₂ -
	7) phenyl	2-fluoro-6-trifluoromethyl	phenylmethyl	-CH ₂ -
	8) phenyl	2-bromo-6-trifluoromethyl	phenylmethyl	-CH ₂ -
	9) phenyl	2-iodo-6-trifluoromethyl	phenylmethyl	-CH ₂ -
15	10) phenyl	2,6-dibromo	phenylmethyl	-CH ₂ -
	11) phenyl	2-bromo-6-fluoro	phenylmethyl	-CH ₂ -
	12) phenyl	2-bromo-6-chloro	phenylmethyl	-CH ₂ -
	13) phenyl	2-chloro-6-trifluoromethoxy	phenylmethyl	-CH ₂ -
20	14) phenyl	2-fluoro-6-trifluoromethoxy	phenylmethyl	-CH ₂ -
	15) phenyl	2-chloro-6-difluoromethoxy	phenylmethyl	-CH ₂ -
	16) phenyl	2-difluoromethoxy-6-fluoro	phenylmethyl	-CH ₂ -
	17) phenyl	2,3-dichloro-6-difluoro-methoxy	phenylmethyl	-CH ₂ -
25	18) phenyl	2,3-difluoro-6-difluoromethoxy	phenylmethyl	-CH ₂ -
	19) phenyl	2,6-bis(difluoromethoxy)	phenylmethyl	-CH ₂ -
	20) phenyl	2,6-bis(trifluoromethoxy)	phenylmethyl	-CH ₂ -
	21) phenyl	2,6-bis(trifluoromethyl)	phenylmethyl	-CH ₂ -
30	22) phenyl	2-bromo	phenylmethyl	-CH ₂ -
	23) phenyl	2-chloro	phenylmethyl	-CH ₂ -
	24) phenyl	2-fluoro	phenylmethyl	-CH ₂ -
	25) phenyl	3-bromo	phenylmethyl	-CH ₂ -
	26) phenyl	3-chloro	phenylmethyl	-CH ₂ -
35	27) phenyl	3-fluoro	phenylmethyl	-CH ₂ -
	28) phenyl	4-bromo	phenylmethyl	-CH ₂ -
	29) phenyl	4-chloro	phenylmethyl	-CH ₂ -
	30) phenyl	4-fluoro	phenylmethyl	-CH ₂ -
40	31) phenyl	4-methoxy	phenylmethyl	-CH ₂ -
	32) phenyl	2-chloro-6-methylthio	phenylmethyl	-CH ₂ -
	33) phenyl	2,3-difluoro-6-methylthio	phenylmethyl	-CH ₂ -
	34) phenyl	2,4-dichloro	phenylmethyl	-CH ₂ -
	35) phenyl	3,5-dichloro	phenylmethyl	-CH ₂ -
45	36) phenyl	2,3,6-trichloro	phenylmethyl	-CH ₂ -
	37) phenyl	2,3,6-trifluoro	phenylmethyl	-CH ₂ -
	38) phenyl	2,3,4,5,6-pentafluoro	phenylmethyl	-CH ₂ -

No. A	R ¹ _n	R ²	Y-R ³ _p
39) phenyl	2-fluoro-6-methyl	phenylmethyl	-CH ₂ -
40) phenyl	2-chloro-6-methyl	phenylmethyl	-CH ₂ -
5 41) phenyl	2,6-dichloro	phenylmethyl	-CH ₂ CH ₂ -
42) phenyl	2-chloro-6-fluoro	phenylmethyl	-CH ₂ CH ₂ -
43) phenyl	2,6-difluoro	phenylmethyl	-CH ₂ CH ₂ -
44) phenyl	2-chloro-5,6-difluoro	phenylmethyl	-CH ₂ CH ₂ -
45) phenyl	2-chloro-6-trifluoromethyl	phenylmethyl	-CH ₂ CH ₂ -
10 46) phenyl	2-fluoro-6-trifluoromethyl	phenylmethyl	-CH ₂ CH ₂ -
47) phenyl	2-bromo-6-trifluoromethyl	phenylmethyl	-CH ₂ CH ₂ -
48) phenyl	2-iodo-6-trifluoromethyl	phenylmethyl	-CH ₂ CH ₂ -
49) phenyl	2,6-dibromo	phenylmethyl	-CH ₂ CH ₂ -
15 50) phenyl	2-bromo-6-fluoro	phenylmethyl	-CH ₂ CH ₂ -
51) phenyl	2-bromo-6-chloro	phenylmethyl	-CH ₂ CH ₂ -
52) phenyl	2-chloro-6-trifluoromethoxy	phenylmethyl	-CH ₂ CH ₂ -
53) phenyl	2-fluoro-6-trifluoromethoxy	phenylmethyl	-CH ₂ CH ₂ -
54) phenyl	2-chloro-6-difluoromethoxy	phenylmethyl	-CH ₂ CH ₂ -
20 55) phenyl	2-difluoromethoxy-6-fluoro	phenylmethyl	-CH ₂ CH ₂ -
56) phenyl	2,3-dichloro-6-difluoromethoxy	phenylmethyl	-CH ₂ CH ₂ -
57) phenyl	2,3-difluoro-6-difluoromethoxy	phenylmethyl	-CH ₂ CH ₂ -
25 58) phenyl	2,6-bis(difluoromethoxy)	phenylmethyl	-CH ₂ CH ₂ -
59) phenyl	2,6-bis(trifluoromethoxy)	phenylmethyl	-CH ₂ CH ₂ -
60) phenyl	2,6-bis(trifluoromethyl)	phenylmethyl	-CH ₂ CH ₂ -
61) phenyl	2-bromo	phenylmethyl	-CH ₂ CH ₂ -
30 62) phenyl	2-chloro	phenylmethyl	-CH ₂ CH ₂ -
63) phenyl	2-fluoro	phenylmethyl	-CH ₂ CH ₂ -
64) phenyl	3-bromo	phenylmethyl	-CH ₂ CH ₂ -
65) phenyl	3-chloro	phenylmethyl	-CH ₂ CH ₂ -
35 66) phenyl	3-fluoro	phenylmethyl	-CH ₂ CH ₂ -
67) phenyl	4-bromo	phenylmethyl	-CH ₂ CH ₂ -
68) phenyl	4-chloro	phenylmethyl	-CH ₂ CH ₂ -
69) phenyl	4-fluoro	phenylmethyl	-CH ₂ CH ₂ -
70) phenyl	4-methoxy	phenylmethyl	-CH ₂ CH ₂ -
40 71) phenyl	2-chloro-6-methylthio	phenylmethyl	-CH ₂ CH ₂ -
72) phenyl	2,3-difluoro-6-methylthio	phenylmethyl	-CH ₂ CH ₂ -
73) phenyl	2,4-dichloro	phenylmethyl	-CH ₂ CH ₂ -
74) phenyl	3,5-dichloro	phenylmethyl	-CH ₂ CH ₂ -
75) phenyl	2,3,6-trichloro	phenylmethyl	-CH ₂ CH ₂ -
45 76) phenyl	2,3,6-trifluoro	phenylmethyl	-CH ₂ CH ₂ -
77) phenyl	2,3,4,5,6-pentafluoro	phenylmethyl	-CH ₂ CH ₂ -
78) phenyl	2-fluoro-6-methyl	phenylmethyl	-CH ₂ CH ₂ -

No.	A	R ¹ _n	R ²	Y-R ³ _p
5	79) phenyl	2-chloro-6-methyl	phenylmethyl	-CH ₂ CH ₂ -
	80) phenyl	2,6-dichloro	(4-chlorophenyl)methyl	-CH ₂ -
	81) phenyl	2-chloro-6-fluoro	(4-chlorophenyl)methyl	-CH ₂ -
	82) phenyl	2,6-difluoro	(4-chlorophenyl)methyl	-CH ₂ -
	83) phenyl	2-chloro-5,6-difluoro	(4-chlorophenyl)methyl	-CH ₂ -
	84) phenyl	2-chloro-6-trifluoromethyl	(4-chlorophenyl)methyl	-CH ₂ -
	85) phenyl	2-fluoro-6-trifluoromethyl	(4-chlorophenyl)methyl	-CH ₂ -
10	86) phenyl	2-bromo-6-trifluoromethyl	(4-chlorophenyl)methyl	-CH ₂ -
	87) phenyl	2-iodo-6-trifluoromethyl	(4-chlorophenyl)methyl	-CH ₂ -
	88) phenyl	2,6-dibromo	(4-chlorophenyl)methyl	-CH ₂ -
	89) phenyl	2-bromo-6-fluoro	(4-chlorophenyl)methyl	-CH ₂ -
	90) phenyl	2-bromo-6-chloro	(4-chlorophenyl)methyl	-CH ₂ -
	91) phenyl	2-chloro-6-trifluoromethoxy	(4-chlorophenyl)methyl	-CH ₂ -
	92) phenyl	2-fluoro-6-trifluoromethoxy	(4-chlorophenyl)methyl	-CH ₂ -
15	93) phenyl	2-chloro-6-difluoromethoxy	(4-chlorophenyl)methyl	-CH ₂ -
	94) phenyl	2-difluoromethoxy-6-fluoro	(4-chlorophenyl)methyl	-CH ₂ -
	95) phenyl	2,3-dichloro-6-difluoromethoxy	(4-chlorophenyl)methyl	-CH ₂ -
	96) phenyl	2,3-difluoro-6-difluoromethoxy	(4-chlorophenyl)methyl	-CH ₂ -
	97) phenyl	2,6-bis(difluoromethoxy)	(4-chlorophenyl)methyl	-CH ₂ -
	98) phenyl	2,6-bis(trifluoromethoxy)	(4-chlorophenyl)methyl	-CH ₂ -
	99) phenyl	2,6-bis(trifluoromethyl)	(4-chlorophenyl)methyl	-CH ₂ -
20	100) phenyl	2-bromo	(4-chlorophenyl)methyl	-CH ₂ -
	101) phenyl	2-chloro	(4-chlorophenyl)methyl	-CH ₂ -
	102) phenyl	2-fluoro	(4-chlorophenyl)methyl	-CH ₂ -
	103) phenyl	3-bromo	(4-chlorophenyl)methyl	-CH ₂ -
	104) phenyl	3-chloro	(4-chlorophenyl)methyl	-CH ₂ -
	105) phenyl	3-fluoro	(4-chlorophenyl)methyl	-CH ₂ -
	106) phenyl	4-bromo	(4-chlorophenyl)methyl	-CH ₂ -
25	107) phenyl	4-chloro	(4-chlorophenyl)methyl	-CH ₂ -
	108) phenyl	4-fluoro	(4-chlorophenyl)methyl	-CH ₂ -
	109) phenyl	4-methoxy	(4-chlorophenyl)methyl	-CH ₂ -
	110) phenyl	2-chloro-6-methylthio	(4-chlorophenyl)methyl	-CH ₂ -
	111) phenyl	2,3-difluoro-6-methylthio	(4-chlorophenyl)methyl	-CH ₂ -
	112) phenyl	2,4-dichloro	(4-chlorophenyl)methyl	-CH ₂ -
	113) phenyl	3,5-dichloro	(4-chlorophenyl)methyl	-CH ₂ -
30	114) phenyl	2,3,6-trichloro	(4-chlorophenyl)methyl	-CH ₂ -
	115) phenyl	2,3,6-trifluoro	(4-chlorophenyl)methyl	-CH ₂ -
	116) phenyl	2,3,4,5,6-pentafluoro	(4-chlorophenyl)methyl	-CH ₂ -
	117) phenyl	2-fluoro-6-methyl	(4-chlorophenyl)methyl	-CH ₂ -
	118) phenyl	2-chloro-6-methyl	(4-chlorophenyl)methyl	-CH ₂ -

No.	A	R ¹ _n	R ²	Y-R ³ _p
5	119)	phenyl	2,6-dichloro	(4-fluorophenyl)methyl
	120)	phenyl	2-chloro-6-fluoro	(4-fluorophenyl)methyl
	121)	phenyl	2,6-difluoro	(4-fluorophenyl)methyl
	122)	phenyl	2-chloro-5,6-difluoro	(4-fluorophenyl)methyl
	123)	phenyl	2-chloro-6-trifluoromethyl	(4-fluorophenyl)methyl
	124)	phenyl	2-fluoro-6-trifluoromethyl	(4-fluorophenyl)methyl
	125)	phenyl	2-bromo-6-trifluoromethyl	(4-fluorophenyl)methyl
10	126)	phenyl	2-iodo-6-trifluoromethyl	(4-fluorophenyl)methyl
	127)	phenyl	2,6-dibromo	(4-fluorophenyl)methyl
	128)	phenyl	2-bromo-6-fluoro	(4-fluorophenyl)methyl
	129)	phenyl	2-bromo-6-chloro	(4-fluorophenyl)methyl
	130)	phenyl	2-chloro-6-trifluoromethoxy	(4-fluorophenyl)methyl
	131)	phenyl	2-fluoro-6-trifluoromethoxy	(4-fluorophenyl)methyl
	132)	phenyl	2-chloro-6-difluoromethoxy	(4-fluorophenyl)methyl
15	133)	phenyl	2-difluoromethoxy-6-fluoro	(4-fluorophenyl)methyl
	134)	phenyl	2,3-dichloro-6-difluoro-methoxy	(4-fluorophenyl)methyl
	135)	phenyl	2,3-difluoro-6-difluoromethoxy	(4-fluorophenyl)methyl
	136)	phenyl	2,6-bis(difluoromethoxy)	(4-fluorophenyl)methyl
	137)	phenyl	2,6-bis(trifluoromethoxy)	(4-fluorophenyl)methyl
	138)	phenyl	2,6-bis(trifluoromethyl)	(4-fluorophenyl)methyl
	139)	phenyl	2-bromo	(4-fluorophenyl)methyl
20	140)	phenyl	2-chloro	(4-fluorophenyl)methyl
	141)	phenyl	2-fluoro	(4-fluorophenyl)methyl
	142)	phenyl	3-bromo	(4-fluorophenyl)methyl
	143)	phenyl	3-chloro	(4-fluorophenyl)methyl
	144)	phenyl	3-fluoro	(4-fluorophenyl)methyl
	145)	phenyl	4-bromo	(4-fluorophenyl)methyl
	146)	phenyl	4-chloro	(4-fluorophenyl)methyl
25	147)	phenyl	4-fluoro	(4-fluorophenyl)methyl
	148)	phenyl	4-methoxy	(4-fluorophenyl)methyl
	149)	phenyl	2-chloro-6-methylthio	(4-fluorophenyl)methyl
	150)	phenyl	2,3-difluoro-6-methylthio	(4-fluorophenyl)methyl
	151)	phenyl	2,4-dichloro	(4-fluorophenyl)methyl
	152)	phenyl	3,5-dichloro	(4-fluorophenyl)methyl
	153)	phenyl	2,3,6-trichloro	(4-fluorophenyl)methyl
30	154)	phenyl	2,3,6-trifluoro	(4-fluorophenyl)methyl
	155)	phenyl	2,3,4,5,6-pentafluoro	(4-fluorophenyl)methyl
	156)	phenyl	2-fluoro-6-methyl	(4-fluorophenyl)methyl
	157)	phenyl	2-chloro-6-methyl	(4-fluorophenyl)methyl
	158)	phenyl	2,6-dichloro	(4-methylphenyl)methyl
				-CH ₂ -

No.	A	R ¹ _n	R ²	Y-R ³ _p	
159)	phenyl	2-chloro-6-fluoro	(4-methylphenyl)methyl	-CH ₂ -	
160)	phenyl	2,6-difluoro	(4-methylphenyl)methyl	-CH ₂ -	
5	161)	phenyl	2-chloro-5,6-difluoro	(4-methylphenyl)methyl	-CH ₂ -
162)	phenyl	2-chloro-6-trifluoromethyl	(4-methylphenyl)methyl	-CH ₂ -	
163)	phenyl	2-fluoro-6-trifluoromethyl	(4-methylphenyl)methyl	-CH ₂ -	
164)	phenyl	2-bromo-6-trifluoromethyl	(4-methylphenyl)methyl	-CH ₂ -	
10	165)	phenyl	2-iodo-6-trifluoromethyl	(4-methylphenyl)methyl	-CH ₂ -
166)	phenyl	2,6-dibromo	(4-methylphenyl)methyl	-CH ₂ -	
167)	phenyl	2-bromo-6-fluoro	(4-methylphenyl)methyl	-CH ₂ -	
168)	phenyl	2-bromo-6-chloro	(4-methylphenyl)methyl	-CH ₂ -	
169)	phenyl	2-chloro-6-trifluoromethoxy	(4-methylphenyl)methyl	-CH ₂ -	
170)	phenyl	2-fluoro-6-trifluoromethoxy	(4-methylphenyl)methyl	-CH ₂ -	
15	171)	phenyl	2-chloro-6-difluoromethoxy	(4-methylphenyl)methyl	-CH ₂ -
172)	phenyl	2-difluoromethoxy-6-fluoro	(4-methylphenyl)methyl	-CH ₂ -	
173)	phenyl	2,3-dichloro-6-difluoro-methoxy	(4-methylphenyl)methyl	-CH ₂ -	
20	174)	phenyl	2,3-difluoro-6-difluoromethoxy	(4-methylphenyl)methyl	-CH ₂ -
175)	phenyl	2,6-bis(difluoromethoxy)	(4-methylphenyl)methyl	-CH ₂ -	
176)	phenyl	2,6-bis(trifluoromethoxy)	(4-methylphenyl)methyl	-CH ₂ -	
25	177)	phenyl	2,6-bis(trifluoromethyl)	(4-methylphenyl)methyl	-CH ₂ -
178)	phenyl	2-bromo	(4-methylphenyl)methyl	-CH ₂ -	
179)	phenyl	2-chloro	(4-methylphenyl)methyl	-CH ₂ -	
180)	phenyl	2-fluoro	(4-methylphenyl)methyl	-CH ₂ -	
181)	phenyl	3-bromo	(4-methylphenyl)methyl	-CH ₂ -	
30	182)	phenyl	3-chloro	(4-methylphenyl)methyl	-CH ₂ -
183)	phenyl	3-fluoro	(4-methylphenyl)methyl	-CH ₂ -	
184)	phenyl	4-bromo	(4-methylphenyl)methyl	-CH ₂ -	
185)	phenyl	4-chloro	(4-methylphenyl)methyl	-CH ₂ -	
35	186)	phenyl	4-fluoro	(4-methylphenyl)methyl	-CH ₂ -
187)	phenyl	4-methoxy	(4-methylphenyl)methyl	-CH ₂ -	
188)	phenyl	2-chloro-6-methylthio	(4-methylphenyl)methyl	-CH ₂ -	
189)	phenyl	2,3-difluoro-6-methylthio	(4-methylphenyl)methyl	-CH ₂ -	
190)	phenyl	2,4-dichloro	(4-methylphenyl)methyl	-CH ₂ -	
40	191)	phenyl	3,5-dichloro	(4-methylphenyl)methyl	-CH ₂ -
192)	phenyl	2,3,6-trichloro	(4-methylphenyl)methyl	-CH ₂ -	
193)	phenyl	2,3,6-trifluoro	(4-methylphenyl)methyl	-CH ₂ -	
194)	phenyl	2,3,4,5,6-pentafluoro	(4-methylphenyl)methyl	-CH ₂ -	
195)	phenyl	2-fluoro-6-methyl	(4-methylphenyl)methyl	-CH ₂ -	
45	196)	phenyl	2-chloro-6-methyl	(4-methylphenyl)methyl	-CH ₂ -
197)	phenyl	2,6-dichloro	(3-methylphenyl)methyl	-CH ₂ -	
198)	phenyl	2-chloro-6-fluoro	(3-methylphenyl)methyl	-CH ₂ -	

No.	A	R ¹ _n	R ²	Y-R ³ _p	
199)	phenyl	2,6-difluoro	(3-methylphenyl)methyl	-CH ₂ -	
200)	phenyl	2-chloro-5,6-difluoro	(3-methylphenyl)methyl	-CH ₂ -	
201)	phenyl	2-chloro-6-trifluoromethyl	(3-methylphenyl)methyl	-CH ₂ -	
202)	phenyl	2-fluoro-6-trifluoromethyl	(3-methylphenyl)methyl	-CH ₂ -	
203)	phenyl	2-bromo-6-trifluoromethyl	(3-methylphenyl)methyl	-CH ₂ -	
204)	phenyl	2-iodo-6-trifluoromethyl	(3-methylphenyl)methyl	-CH ₂ -	
205)	phenyl	2,6-dibromo	(3-methylphenyl)methyl	-CH ₂ -	
10	206)	phenyl	2-bromo-6-fluoro	(3-methylphenyl)methyl	-CH ₂ -
207)	phenyl	2-bromo-6-chloro	(3-methylphenyl)methyl	-CH ₂ -	
208)	phenyl	2-chloro-6-trifluoromethoxy	(3-methylphenyl)methyl	-CH ₂ -	
209)	phenyl	2-fluoro-6-trifluoromethoxy	(3-methylphenyl)methyl	-CH ₂ -	
15	210)	phenyl	2-chloro-6-difluoromethoxy	(3-methylphenyl)methyl	-CH ₂ -
211)	phenyl	2-difluoromethoxy-6-fluoro	(3-methylphenyl)methyl	-CH ₂ -	
212)	phenyl	2,3-dichloro-6-difluoro-methoxy	(3-methylphenyl)methyl	-CH ₂ -	
20	213)	phenyl	2,3-difluoro-6-difluoromethoxy	(3-methylphenyl)methyl	-CH ₂ -
214)	phenyl	2,6-bis(difluoromethoxy)	(3-methylphenyl)methyl	-CH ₂ -	
215)	phenyl	2,6-bis(trifluoromethoxy)	(3-methylphenyl)methyl	-CH ₂ -	
216)	phenyl	2,6-bis(trifluoromethyl)	(3-methylphenyl)methyl	-CH ₂ -	
25	217)	phenyl	2-bromo	(3-methylphenyl)methyl	-CH ₂ -
218)	phenyl	2-chloro	(3-methylphenyl)methyl	-CH ₂ -	
219)	phenyl	2-fluoro	(3-methylphenyl)methyl	-CH ₂ -	
220)	phenyl	3-bromo	(3-methylphenyl)methyl	-CH ₂ -	
221)	phenyl	3-chloro	(3-methylphenyl)methyl	-CH ₂ -	
30	222)	phenyl	3-fluoro	(3-methylphenyl)methyl	-CH ₂ -
223)	phenyl	4-bromo	(3-methylphenyl)methyl	-CH ₂ -	
224)	phenyl	4-chloro	(3-methylphenyl)methyl	-CH ₂ -	
225)	phenyl	4-fluoro	(3-methylphenyl)methyl	-CH ₂ -	
35	226)	phenyl	4-methoxy	(3-methylphenyl)methyl	-CH ₂ -
227)	phenyl	2-chloro-6-methylthio	(3-methylphenyl)methyl	-CH ₂ -	
228)	phenyl	2,3-difluoro-6-methylthio	(3-methylphenyl)methyl	-CH ₂ -	
229)	phenyl	2,4-dichloro	(3-methylphenyl)methyl	-CH ₂ -	
230)	phenyl	3,5-dichloro	(3-methylphenyl)methyl	-CH ₂ -	
40	231)	phenyl	2,3,6-trichloro	(3-methylphenyl)methyl	-CH ₂ -
232)	phenyl	2,3,6-trifluoro	(3-methylphenyl)methyl	-CH ₂ -	
233)	phenyl	2,3,4,5,6-pentafluoro	(3-methylphenyl)methyl	-CH ₂ -	
234)	phenyl	2-fluoro-6-methyl	(3-methylphenyl)methyl	-CH ₂ -	
235)	phenyl	2-chloro-6-methyl	(3-methylphenyl)methyl	-CH ₂ -	
45	236)	phenyl	2,6-dichloro	(4-trifluoromethylphenyl)-methyl	-CH ₂ -

No.	A	R ¹ _n	R ²	Y-R ³ _p	
5	237)	phenyl	2-chloro-6-fluoro	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	238)	phenyl	2,6-difluoro	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	239)	phenyl	2-chloro-5,6-difluoro	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
10	240)	phenyl	2-chloro-6-trifluoromethyl	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	241)	phenyl	2-fluoro-6-trifluoromethyl	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	242)	phenyl	2-bromo-6-trifluoromethyl	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
15	243)	phenyl	2-iodo-6-trifluoromethyl	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	244)	phenyl	2,6-dibromo	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	245)	phenyl	2-bromo-6-fluoro	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
20	246)	phenyl	2-bromo-6-chloro	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	247)	phenyl	2-chloro-6-trifluoromethoxy	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	248)	phenyl	2-fluoro-6-trifluoromethoxy	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
25	249)	phenyl	2-chloro-6-difluoromethoxy	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	250)	phenyl	2-difluoromethoxy-6-fluoro	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
30	251)	phenyl	2,3-dichloro-6-difluoro-methoxy	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	252)	phenyl	2,3-difluoro-6-difluoromethoxy	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	253)	phenyl	2,6-bis(difluoromethoxy)	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
35	254)	phenyl	2,6-bis(trifluoromethoxy)	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	255)	phenyl	2,6-bis(trifluoromethyl)	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	256)	phenyl	2-bromo	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
40	257)	phenyl	2-chloro	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	258)	phenyl	2-fluoro	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
	259)	phenyl	3-bromo	(4-trifluoromethylphenyl)-methyl	-CH ₂ -
45	260)	phenyl	3-chloro	(4-trifluoromethylphenyl)-methyl	-CH ₂ -

No.	A	R ¹ _n	R ²	Y-R ³ _p
5	261)	phenyl	3-fluoro	(4-trifluoromethylphenyl)-methyl
	262)	phenyl	4-bromo	(4-trifluoromethylphenyl)-methyl
	263)	phenyl	4-chloro	(4-trifluoromethylphenyl)-methyl
10	264)	phenyl	4-fluoro	(4-trifluoromethylphenyl)-methyl
	265)	phenyl	4-methoxy	(4-trifluoromethylphenyl)-methyl
15	266)	phenyl	2-chloro-6-methylthio	(4-trifluoromethylphenyl)-methyl
	267)	phenyl	2,3-difluoro-6-methylthio	(4-trifluoromethylphenyl)-methyl
20	268)	phenyl	2,4-dichloro	(4-trifluoromethylphenyl)-methyl
	269)	phenyl	3,5-dichloro	(4-trifluoromethylphenyl)-methyl
25	270)	phenyl	2,3,6-trichloro	(4-trifluoromethylphenyl)-methyl
	271)	phenyl	2,3,6-trifluoro	(4-trifluoromethylphenyl)-methyl
30	272)	phenyl	2,3,4,5,6-pentafluoro	(4-trifluoromethylphenyl)-methyl
	273)	phenyl	2-fluoro-6-methyl	(4-trifluoromethylphenyl)-methyl
35	274)	phenyl	2-chloro-6-methyl	(4-trifluoromethylphenyl)-methyl
	275)	phenyl	2,6-dichloro	(4-methoxyphenyl)methyl
40	276)	phenyl	2-chloro-6-fluoro	(4-methoxyphenyl)methyl
	277)	phenyl	2,6-difluoro	(4-methoxyphenyl)methyl
45	278)	phenyl	2-chloro-5,6-difluoro	(4-methoxyphenyl)methyl
	279)	phenyl	2-chloro-6-trifluoromethyl	(4-methoxyphenyl)methyl
	280)	phenyl	2-fluoro-6-trifluoromethyl	(4-methoxyphenyl)methyl
	281)	phenyl	2-bromo-6-trifluoromethyl	(4-methoxyphenyl)methyl
	282)	phenyl	2-iodo-6-trifluoromethyl	(4-methoxyphenyl)methyl
	283)	phenyl	2,6-dibromo	(4-methoxyphenyl)methyl
	284)	phenyl	2-bromo-6-fluoro	(4-methoxyphenyl)methyl
	285)	phenyl	2-bromo-6-chloro	(4-methoxyphenyl)methyl
	286)	phenyl	2-chloro-6-trifluoromethoxy	(4-methoxyphenyl)methyl
	287)	phenyl	2-fluoro-6-trifluoromethoxy	(4-methoxyphenyl)methyl
	288)	phenyl	2-chloro-6-difluoromethoxy	(4-methoxyphenyl)methyl
	289)	phenyl	2-difluoromethoxy-6-fluoro	(4-methoxyphenyl)methyl
	290)	phenyl	2,3-dichloro-6-difluoro-methoxy	(4-methoxyphenyl)methyl

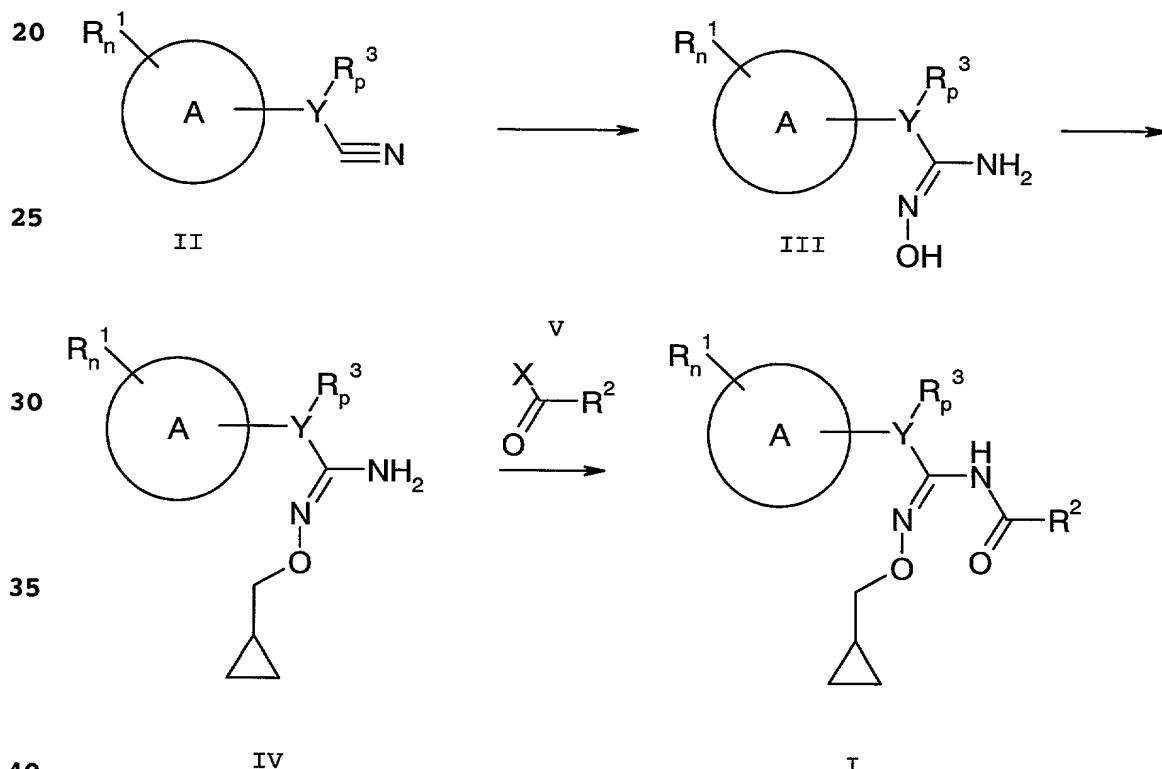
No.	A	R ¹ _n	R ²	Y-R ³ _p
291)	phenyl	2,3-difluoro-6-difluoromethoxy	(4-methoxyphenyl)methyl	-CH ₂ -
292)	phenyl	2,6-bis(difluoromethoxy)	(4-methoxyphenyl)methyl	-CH ₂ -
293)	phenyl	2,6-bis(trifluoromethoxy)	(4-methoxyphenyl)methyl	-CH ₂ -
294)	phenyl	2,6-bis(trifluoromethyl)	(4-methoxyphenyl)methyl	-CH ₂ -
295)	phenyl	2-bromo	(4-methoxyphenyl)methyl	-CH ₂ -
296)	phenyl	2-chloro	(4-methoxyphenyl)methyl	-CH ₂ -
297)	phenyl	2-fluoro	(4-methoxyphenyl)methyl	-CH ₂ -
298)	phenyl	3-bromo	(4-methoxyphenyl)methyl	-CH ₂ -
299)	phenyl	3-chloro	(4-methoxyphenyl)methyl	-CH ₂ -
300)	phenyl	3-fluoro	(4-methoxyphenyl)methyl	-CH ₂ -
301)	phenyl	4-bromo	(4-methoxyphenyl)methyl	-CH ₂ -
302)	phenyl	4-chloro	(4-methoxyphenyl)methyl	-CH ₂ -
303)	phenyl	4-fluoro	(4-methoxyphenyl)methyl	-CH ₂ -
304)	phenyl	4-methoxy	(4-methoxyphenyl)methyl	-CH ₂ -
305)	phenyl	2-chloro-6-methylthio	(4-methoxyphenyl)methyl	-CH ₂ -
306)	phenyl	2,3-difluoro-6-methylthio	(4-methoxyphenyl)methyl	-CH ₂ -
307)	phenyl	2,4-dichloro	(4-methoxyphenyl)methyl	-CH ₂ -
308)	phenyl	3,5-dichloro	(4-methoxyphenyl)methyl	-CH ₂ -
309)	phenyl	2,3,6-trichloro	(4-methoxyphenyl)methyl	-CH ₂ -
310)	phenyl	2,3,6-trifluoro	(4-methoxyphenyl)methyl	-CH ₂ -
311)	phenyl	2,3,4,5,6-pentafluoro	(4-methoxyphenyl)methyl	-CH ₂ -
312)	phenyl	2-fluoro-6-methyl	(4-methoxyphenyl)methyl	-CH ₂ -
313)	phenyl	2-chloro-6-methyl	(4-methoxyphenyl)methyl	-CH ₂ -
314)	phenyl	2,6-dichloro	(2-thienyl)methyl	-CH ₂ -
315)	phenyl	2-chloro-6-fluoro	(2-thienyl)methyl	-CH ₂ -
316)	phenyl	2,6-difluoro	(2-thienyl)methyl	-CH ₂ -
317)	phenyl	2-chloro-5,6-difluoro	(2-thienyl)methyl	-CH ₂ -
318)	phenyl	2-chloro-6-trifluoromethyl	(2-thienyl)methyl	-CH ₂ -
319)	phenyl	2-fluoro-6-trifluoromethyl	(2-thienyl)methyl	-CH ₂ -
320)	phenyl	2-bromo-6-trifluoromethyl	(2-thienyl)methyl	-CH ₂ -
321)	phenyl	2-iodo-6-trifluoromethyl	(2-thienyl)methyl	-CH ₂ -
322)	phenyl	2,6-dibromo	(2-thienyl)methyl	-CH ₂ -
323)	phenyl	2-bromo-6-fluoro	(2-thienyl)methyl	-CH ₂ -
324)	phenyl	2-bromo-6-chloro	(2-thienyl)methyl	-CH ₂ -
325)	phenyl	2-chloro-6-trifluoromethoxy	(2-thienyl)methyl	-CH ₂ -
326)	phenyl	2-fluoro-6-trifluoromethoxy	(2-thienyl)methyl	-CH ₂ -
327)	phenyl	2-chloro-6-difluoromethoxy	(2-thienyl)methyl	-CH ₂ -
328)	phenyl	2-difluoromethoxy-6-fluoro	(2-thienyl)methyl	-CH ₂ -
329)	phenyl	2,3-dichloro-6-difluoromethoxy	(2-thienyl)methyl	-CH ₂ -

No.	A	R ¹ _n	R ²	X-R ³ _p
330)	phenyl	2,3-difluoro-6-difluoromethoxy	(2-thienyl)methyl	-CH ₂ -
331)	phenyl	2,6-bis(difluoromethoxy)	(2-thienyl)methyl	-CH ₂ -
332)	phenyl	2,6-bis(trifluoromethoxy)	(2-thienyl)methyl	-CH ₂ -
333)	phenyl	2,6-bis(trifluoromethyl)	(2-thienyl)methyl	-CH ₂ -
334)	phenyl	2-bromo	(2-thienyl)methyl	-CH ₂ -
335)	phenyl	2-chloro	(2-thienyl)methyl	-CH ₂ -
336)	phenyl	2-fluoro	(2-thienyl)methyl	-CH ₂ -
337)	phenyl	3-bromo	(2-thienyl)methyl	-CH ₂ -
338)	phenyl	3-chloro	(2-thienyl)methyl	-CH ₂ -
339)	phenyl	3-fluoro	(2-thienyl)methyl	-CH ₂ -
340)	phenyl	4-bromo	(2-thienyl)methyl	-CH ₂ -
341)	phenyl	4-chloro	(2-thienyl)methyl	-CH ₂ -
342)	phenyl	4-fluoro	(2-thienyl)methyl	-CH ₂ -
343)	phenyl	4-methoxy	(2-thienyl)methyl	-CH ₂ -
344)	phenyl	2-chloro-6-methylthio	(2-thienyl)methyl	-CH ₂ -
345)	phenyl	2,3-difluoro-6-methylthio	(2-thienyl)methyl	-CH ₂ -
346)	phenyl	2,4-dichloro	(2-thienyl)methyl	-CH ₂ -
347)	phenyl	3,5-dichloro	(2-thienyl)methyl	-CH ₂ -
348)	phenyl	2,3,6-trichloro	(2-thienyl)methyl	-CH ₂ -
349)	phenyl	2,3,6-trifluoro	(2-thienyl)methyl	-CH ₂ -
350)	phenyl	2,3,4,5,6-pentafluoro	(2-thienyl)methyl	-CH ₂ -
351)	phenyl	2-fluoro-6-methyl	(2-thienyl)methyl	-CH ₂ -
352)	phenyl	2-chloro-6-methyl	(2-thienyl)methyl	-CH ₂ -
353)	phenyl	2,6-dichloro	phenylmethyl	-CH(CH ₃)-
354)	phenyl	2-chloro-6-fluoro	phenylmethyl	-CH(CH ₃)-
355)	phenyl	2,6-difluoro	phenylmethyl	-CH(CH ₃)-
356)	phenyl	2-chloro-5,6-difluoro	phenylmethyl	-CH(CH ₃)-
357)	phenyl	2-chloro-6-trifluoromethyl	phenylmethyl	-CH(CH ₃)-
358)	phenyl	2-fluoro-6-trifluoromethyl	phenylmethyl	-CH(CH ₃)-
359)	phenyl		phenylmethyl	-CH(CH ₃)-
360)	phenyl	2,6-dichloro	phenylmethyl	-O-CH ₂ -
361)	phenyl	2-chloro-6-fluoro	phenylmethyl	-O-CH ₂ -
362)	phenyl	2,6-difluoro	phenylmethyl	-O-CH ₂ -
363)	phenyl	2-chloro-5,6-difluoro	phenylmethyl	-O-CH ₂ -
364)	phenyl	2-chloro-6-trifluoromethyl	phenylmethyl	-O-CH ₂ -
365)	phenyl	2-fluoro-6-trifluoromethyl	phenylmethyl	-O-CH ₂ -
366)	phenyl		phenylmethyl	-O-CH ₂ -
367)	2-pyridyl		phenylmethyl	-CH ₂ -
368)	3-pyridyl		phenylmethyl	-CH ₂ -
369)	2-pyridyl	3-chloro	phenylmethyl	-CH ₂ -
370)	2-thienyl	3-chloro	phenylmethyl	-CH ₂ -

NO. A	R ¹ _n	R ²	Y-R ³ _p
371) 3-pyridyl	4-chloro	phenylmethyl	-CH ₂ -
372) 3-pyridyl	4-trifluoromethyl	phenylmethyl	-CH ₂ -
373) 3-pyridyl	2-methyl-4-trifluoromethyl	phenylmethyl	-CH ₂ -
374) phenyl	2, 3-dichloro	phenylmethyl	-CH ₂ -

The amidoximes of the formula III are obtained by reaction of nitriles of the formula II with hydroxylamine or salts thereof in aqueous solution, preferably in water or water/alkanol mixtures, if appropriate in the presence of a base. The amidoximes can then be alkylated in a manner known per se to give the precursors IV, preferred alkylating agents being cyclopropylmethyl bromide or cyclopropylmethyl chloride. The iodide and organic sulfonic acid radicals are likewise suitable for activating the cyclopropylmethyl radical.

The compounds of the formula I can preferably be prepared according to the following scheme:



The amidoximes IV can then be acylated in a manner known per se with the corresponding acid derivatives V, preferably with the corresponding acid chlorides or acid anhydrides, by heating in inert solvents (preferably at temperatures in the range from 20 to 100°C). Suitable inert solvents are, in particular, hydrocarbons or ethers, particularly preferably aromatic

hydrocarbons, such as toluene and xylene, to name but two examples.

The intermediates of the formula III and the intermediates of the 5 formula IV mentioned in the reaction scheme above are novel and also form part of the subject matter of the present invention. Preferred amidoximes of the formula III are the compounds mentioned in Table 2:

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Table 2:

A	R ¹ _n	Y-R ³ _p	Physical data
5 phenyl	2,6-dichloro	-CH ₂ -	m.p. 172-173°C
phenyl	2-chloro-6-fluoro	-CH ₂ -	m.p. 138-141°C
phenyl	2,3,6-trifluoro	-CH ₂ -	m.p. 151-153°C
phenyl		-CH ₂ -	m.p. 39-42°C
10 phenyl		-CH(CH ₃)-	m.p. 85-88°C
phenyl	2,6-difluoro	-CH ₂ -	m.p. 124-126°C
phenyl	3,5-dichloro	-CH ₂ -	m.p. 103-107°C
phenyl	2,3-dichloro	-CH ₂ -	m.p. 162-163°C
15 phenyl	2,3,6-trichloro	-CH ₂ -	¹ H-NMR (CDCl ₃) δ = 3.90 (s); 4.63 (s); 7.25-7.40 (m); 7.43 (broadened).
phenyl	2-fluoro-6-trifluoromethyl	-CH ₂ -	¹ H-NMR (CDCl ₃) δ = 3.72 (s); 4.58 (s); 7.20-7.50 (m).
20 phenyl	2-chloro	-CH ₂ -	¹ H-NMR (CDCl ₃) δ = 3.63 (s); 4.63 (s); 7.22 (m); 7.35 (m); 8.67 (broadened).
25 phenyl	2,4-dichloro	-CH ₂ -	m.p. 155-157°C

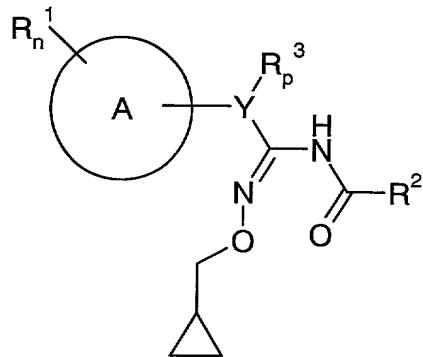
Preferred amidoxime derivatives of the formula I are the compounds mentioned in Table 3, wherein R² is benzyl:

Table 3:

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	A	R ¹ _n	Y-R ³ _p	Physical data
5	phenyl	2,3-difluoro-6-difluoromethoxy	-CH ₂ -	¹ H-NMR (CDCl ₃) δ = 0,02 (s); 0,43 (m); 0,85 (m), 3,55 (d); 3,70 (s); 4,20 (s); 6,35 (t); 6,87 (m); 7,05 (m); 7,25-7,45 (m); 8,40 (s)
10	phenyl	2-trifluoromethyl	-CH ₂ -	m.p. 66-67°C
	phenyl	2-fluoro-5-trifluoromethyl	-CH ₂ -	m.p. 65-67°C
	phenyl	2-trifluoro-methoxy	-CH ₂ -	m.p. 59-62°C
	phenyl	2-chloro-3,6-difluoro	-CH ₂ -	m.p. 87-88°C
15	phenyl	2,3,5-trifluoro	-CH ₂ -	m.p. 74-75°C
	phenyl	2-chloro-5-trifluoromethyl	-CH ₂ -	m.p. 64°C
	phenyl	6-chloro-2-fluoro-3-methyl	-CH ₂ -	m.p. 101°C
20	phenyl	2-chloro-6-fluoro-3-methyl	-CH ₂ -	m.p. 96°C
	phenyl	2,3-difluoro-6-methoxy	-CH ₂ -	m.p. 63-65°C
	phenyl	2,6-difluoro-3-methyl	-CH ₂ -	m.p. 72°C
25	phenyl	2,6-dimethyl	-CH ₂ -	m.p. 80-81°C
	phenyl	3,5-dichloro	-CH ₂ -	m.p. 53-57°C
	phenyl	2-chloro-6-fluoro	-CH ₂ -	m.p. 42-43°C
	phenyl	2,6-dichloro	-CH ₂ -	m.p. 65-67°C
	phenyl	2,3-dichloro	-CH ₂ -	m.p. 46-48°C
30	phenyl	2,3,6-trichloro	-CH ₂ -	m.p. 78-81°C
	phenyl	2-fluoro-6-trifluoromethyl	-CH ₂ -	m.p. 49-51°C
35	phenyl	H	-CH ₂ -	¹ H-NMR (CDCl ₃) δ = 0.28 (m); 0.54 (m); 1.15 (m); 3.46 (s); 3.80 (d); 4.45 (s); 7.23-7.53 (m).
40	phenyl	H	-CH(CH ₃)-	¹ H-NMR (CDCl ₃) δ = 0.30 (m); 0.53 (m); 1.15 (m); 1.50 (d); 3.63 (q); 3.83 (d); 4.33 (s); 7.23-7.37 (m).
45	phenyl	2,6-difluoro	-CH ₂ -	¹ H-NMR (CDCl ₃) δ = 0.25 (m); 0.50 (m); 1.10 (m); 3.53 (s); 3.78 (d); 4.60 (s); 6.90 (m); 7.23 (m).

A	R ¹ _n	Y-R ³ _p	Physical data
5	phenyl 2,3,6-trifluoro	-CH ₂ -	¹ H-NMR (CDCl ₃) δ = 0.25 (m); 0.50 (m); 1.10 (m); 3.53 (s); 3.76 (d); 4.60 (s); 6.87 (m); 7.07 (m).
10	phenyl 2-chloro	-CH ₂ -	¹ H-NMR (CDCl ₃) δ = 0.26 (m); 0.52 (m); 1.13 (m); 3.62 (s); 3.80 (d); 4.60 (s); 7.22 (m); 7.40 (m).
	phenyl 2,4-dichloro	-CH ₂ -	¹ H-NMR (CDCl ₃) δ = 0.27 (m); 0.55 (m); 1.13 (m); 3.57 (s); 3.80 (d); 4.58 (s); 7.18-7.43 (m).

15 The compounds I have an outstanding activity against a broad range of phytopathogenic fungi, in particular from the classes of the Ascomycetes, Deuteromycetes, Phycomycetes and Basidiomycetes. Some of them act systemically and can therefore also be employed as foliar- and soil-acting fungicides.

20 The plants are usually sprayed or dusted with the active compounds, or the seeds of the plants are treated with the active compounds.

25 The formulations are prepared in a known manner, for example by extending the active compound with solvents and/or carriers, if desired using emulsifiers and dispersants, where, if the diluent used is water, it is also possible to use other organic solvents as auxiliary solvents. Suitable auxiliaries are essentially: solvents, such as aromatic compounds (for example xylene),

30 chlorinated aromatic compounds (for example chlorobenzenes), paraffins (for example mineral oil fractions), alcohols (for example methanol, butanol), ketones (for example cyclohexanone), amines (for example ethanolamine, dimethylformamide) and water; carriers such as ground natural minerals (for example kaolins,

35 clays, talc, chalk) and ground synthetic minerals (for example finely divided silica, silicates); emulsifiers, such as nonionic and anionic emulsifiers (for example polyoxyethylene fatty alcohol ethers, alkylsulfonates and arylsulfonates), and dispersants, such as ligninsulfite waste liquors and methyl

40 cellulose.

Suitable surfactants are the alkali metal salts, alkaline earth metal salts and ammonium salts of aromatic sulfonic acids, for example ligno-, phenol-, naphthalene- and

45 dibutylnaphthalenesulfonic acid, and of fatty acids, alkylsulfonates and alkylarylsulfonates, alkyl sulfates, lauryl ether sulfates and fatty alcohol sulfates, and salts of sulfated

hexa-, hepta- and octadecanols, and of fatty alcohol glycol ethers, condensates of sulfonated naphthalene and its derivatives with formaldehyde, condensates of naphthalene or of the naphthalenesulfonic acids with phenol and formaldehyde,

5 polyoxyethylene octylphenol ether, ethoxylated isooctyl-, octyl- or nonylphenol, alkylphenol or tributylphenyl polyglycol ether, alkylaryl polyether alcohols, isotridecyl alcohol, fatty alcohol ethylene oxide condensates, ethoxylated castor oil, polyoxyethylene alkyl ethers or polyoxypropylene alkyl ethers,

10 lauryl alcohol polyglycol ether acetate, sorbitol esters, lignosulfite waste liquors or methylcellulose.

Powders, materials for scattering and dusts can be prepared by mixing or jointly grinding the active compounds with a solid

15 carrier.

Granules, for example coated granules, impregnated granules or homogeneous granules, can be prepared by binding the active compounds to solid carriers. Solid carriers are mineral earths

20 such as silica gel, silicas, silicates, talc, kaolin, limestone, lime, chalk, bole, loess, clay, dolomite, diatomaceous earth, calcium sulfate, magnesium sulfate, magnesium oxide, ground synthetic materials, and fertilizers, such as ammonium sulfate, ammonium phosphate, ammonium nitrate, ureas and products of

25 vegetable origin, such as cereal meal, tree bark meal, wood meal and nutshell meal, cellulose powders or other solid carriers.

Examples of such preparations are:

30 I. a solution of 90 parts by weight of a compound I according to the invention and 10 parts by weight of N-methyl-2-pyrrolidone, which is suitable for use in the form of microdrops;

35 II. a mixture of 10 parts by weight of a compound I according to the invention, 70 parts by weight of xylene, 10 parts by weight of the adduct of 8 to 10 mol of ethylene oxide to 1 mol of oleic acid N-monoethanolamide, 5 parts by weight of calcium dodecylbenzenesulfonate, 5 parts by

40 weight of the adduct of 40 mol of ethylene oxide to 1 mol of castor oil; a dispersion is obtained by finely distributing the solution in water;

III. an aqueous dispersion of 10 parts by weight of a compound I according to the invention, 40 parts by weight of cyclohexanone, 30 parts by weight of isobutanol, 20 parts

by weight of the adduct of 40 mol of ethylene oxide to 1 mol of castor oil;

IV. an aqueous dispersion of 10 parts by weight of a compound I according to the invention, 25 parts by weight of cyclohexanol, 55 parts by weight of a mineral oil fraction of boiling point 210 to 280°C and 10 parts by weight of the adduct of 40 mol of ethylene oxide to 1 mol of castor oil;

10 V. a mixture, ground in a hammer mill, of 80 parts by weight of a compound I according to the invention, preferably in solid form, 3 parts by weight of sodium diisobutylnaphthalene-2-sulfonate, 10 parts by weight of the sodium salt of a lignosulfonic acid from a sulfite waste liquor and 7 parts by weight of pulverulent silica gel; a spray mixture is obtained by finely distributing the mixture in water;

15 20 VI. an intimate mixture of 3 parts by weight of a compound I according to the invention and 97 parts by weight of finely divided kaolin; this dust comprises 3% by weight of active compound;

25 VII. an intimate mixture of 30 parts by weight of a compound I according to the invention, 62 parts by weight of pulverulent silica gel and 8 parts by weight of paraffin oil which has been sprayed onto the surface of this silica gel; this formulation imparts good adhesion to the active compound;

30 VIII. a stable aqueous dispersion of 40 parts by weight of a compound I according to the invention, 10 parts by weight of the sodium salt of a phenolsulfonic acid/urea/formaldehyde condensate, 2 parts by weight of silica gel and 48 parts by weight of water, it being possible for this dispersion to be diluted further;

35 IX. a stable oily dispersion of 20 parts by weight of a compound I according to the invention, 2 parts by weight of calcium dodecylbenzenesulfonate, 8 parts by weight of fatty alcohol polyglycol ether, 20 parts by weight of the sodium salt of a phenolsulfonic acid/urea/formaldehyde condensate and 50 parts by weight of a paraffinic mineral oil.

40

45

The novel compounds have an outstanding activity against a broad range of phytopathogenic fungi, in particular from the classes of the Deuteromycetes, Ascomycetes, Phycomycetes and Basidiomycetes. Some of them act systemically and can be employed as foliar- and 5 soil-acting fungicides.

They are especially important for controlling a large number of fungi in a variety of crops, such as wheat, rye, barley, oats, rice, maize, lawns, cotton, soy, coffee, sugar cane, grapevines, 10 fruit species, ornamentals and vegetable species such as cucumbers, beans and cucurbits as well as in the seeds of these plants.

The compounds are applied by treating the fungi or the seeds, 15 plants, materials or the soil to be kept free from them with a fungicidally effective amount of the active compounds.

Application is effected before or after infection of the materials, plants or seeds by the fungi.

20 Specifically, the novel compounds are suitable for controlling the following plant diseases:

Erysiphe graminis (powdery mildew) in cereals, Erysiphe 25 cichoracearum and Sphaerotheca fuliginea in cucurbits, Podosphaera leucotricha in apples, Uncinula necator in grapevines, Puccinia species in cereals, Rhizoctonia species in cotton and lawns, Ustilago species in cereals and sugar cane, Venturia inaequalis (scab) in apples, Helminthosporium species in 30 cereals, Septoria nodorum in wheat, Botrytis cinerea (gray mold) in strawberries, grapevines, ornamentals and vegetables, Cercospora arachidicola in groundnuts, Pseudocercospora herpotrichoides in wheat and barley, Pyricularia oryzae in rice, Phytophthora infestans in potatoes and tomatoes, Fusarium and 35 Verticillium species in a variety of plants, Plasmopara viticola in grapevines, Alternaria species in vegetables and fruit.

The novel compounds can also be used in the protection of materials (wood protection), for example against Paecilomyces 40 variotii.

In general, the fungicidal compositions comprise from 0.1 to 95, preferably from 0.5 to 90, % by weight of active compound.

Depending on the nature of the desired effect, the rates of application are from 0.025 to 2, preferably from 0.1 to 1, kg of active compound per ha.

5 In the treatment of seed, amounts of from 0.001 to 50 g, preferably 0.01 to 10 g, of active compound are generally required per kilogram of seed.

10 The compositions according to the invention in the use form as fungicides may also be present together with other active compounds, e.g. with herbicides, insecticides, growth regulators, fungicides or else with fertilizers.

15 In many cases, a mixture with fungicides results in a widened fungicidal spectrum of action.

20 The following list of fungicides together with which the compounds according to the invention can be used is intended to illustrate the possible combinations, but not to impose any limitation:

25 sulfur, dithiocarbamates and their derivatives, such as iron dimethyldithiocarbamate, zinc dimethyldithiocarbamate, zinc ethylenebisdithiocarbamate, manganese ethylenebisdithiocarbamate, manganese zinc ethylenediamine-bis-dithiocarbamate, tetramethylthiuram disulfide, ammonia complex of zinc (N,N-ethylene-bis-dithiocarbamate), ammonia complex of zinc (N,N'-propylene-bis-dithiocarbamate), zinc (N,N'-propylene-bisdithiocarbamate), N,N'-polypropylenebis(thiocarbamoyl) disulfide;

30 nitro derivatives, such as dinitro-(1-methylheptyl)phenyl crotonate, 2-sec-butyl-4,6-dinitrophenyl-3,3-dimethyl acrylate, 2-sec-butyl-4,6-dinitrophenylisopropyl carbonate, diisopropyl 5-nitroisophthalate;

35 heterocyclic substances, such as 2-heptadecyl-2-imidazoline acetate, 2,4-dichloro-6-(o-chloroanilino)-s-triazine, O,O-diethyl phthalimidophosphonothioate, 5-amino-1-[bis(dimethylamino)-phosphinyl]-3-phenyl-1,2,4-triazole, 2,3-dicyano-1,4-dithio-40 anthraquinone, 2-thio-1,3-dithiolo[4,5-b]quinoxaline, methyl 1-(butylcarbamoyl)-2-benzimidazolecarbamate, 2-methoxycarbonyl-aminobenzimidazole, 2-(furyl-(2))benzimidazole, 2-(thiazolyl-(4))benzimidazole, N-(1,1,2,2-tetrachloroethylthio)tetrahydro-phthalimide, N-trichloromethylthiotetrahydrophthalimide, 45 N-trichloromethylthiophthalimide,

N-dichlorofluoromethylthio-N',N'-dimethyl-N-phenylsulfuric diamide, 5-ethoxy-3-trichloromethyl-1,2,3-thiadiazole, 2-thiocyanatomethylthiobenzothiazole, 1,4-dichloro-2,5-dimethoxybenzene, 4-(2-chlorophenylhydrazono)-3-methyl-5-isoxazolone,

5 pyridine-2-thione 1-oxide, 8-hydroxyquinoline or its copper salt, 2,3-dihydro-5-carboxanilido-6-methyl-1,4-oxathiine, 2,3-dihydro-5-carboxanilido-6-methyl-1,4-oxathiine 4,4-dioxide, 2-methyl-5,6-dihydro-4H-pyran-3-carboxanilide, 2-methylfuran-3-carboxanilide, 2,5-dimethylfuran-3-carboxanilide, 2,4,5-trimethylfuran-

10 3-carboxanilide, N-cyclohexyl-2,5-dimethylfuran-3-carboxamide, N-cyclohexyl-N-methoxy-2,5-dimethylfuran-3-carboxamide, 2-methylbenzanilide, 2-iodobenzanilide, N-formyl-N-morpholine 2,2,2-trichloroethyl acetal, piperazine-1,4-diylbis-1-(2,2,2-trichloroethyl)formamide, 1-(3,4-dichloroanilino)-

15 1-formylamino-2,2,2-trichloroethane,

2,6-dimethyl-N-tridecylmorpholine or its salts, 2,6-dimethyl-N-cyclododecylmorpholine or its salts, N-[3-(p-tert-butylphenyl)-2-methylpropyl]-cis-

20 2,6-dimethylmorpholine, N-[3-(p-tert-butylphenyl)-2-methylpropyl]piperidine, 1-[2-(2,4-dichlorophenyl)-4-ethyl-1,3-dioxolan-2-ylethyl]-1H-1,2,4-triazole, 1-[2-(2,4-dichlorophenyl)-4-n-propyl-1,3-dioxolan-2-ylethyl]-1H-1,2,4-triazole, N-(n-propyl)-N-(2,4,6-trichlorophenoxyethyl)-N'-imidazolylurea,

25 1-(4-chlorophenoxy)-3,3-dimethyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone, (2-chlorophenyl)-(4-chlorophenyl)-5-pyrimidine-methanol, 5-butyl-2-dimethylamino-4-hydroxy-6-methylpyrimidine, bis(p-chlorophenyl)-3-pyridinemethanol, 1,2-bis(3-ethoxycarbonyl-2-thioureido)benzene, 1,2-bis(3-methoxycarbonyl-2-thioureido)-

30 benzene, [2-(4-chlorophenyl)ethyl]-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol, 1-[3-(2-chlorophenyl)-1-(4-fluorophenyl)-oxiran-2-ylmethyl]-1H-1,2,4-triazole, and

a variety of fungicides, such as dodecylguanidine acetate,

35 3-[3-(3,5-dimethyl-2-oxycyclohexyl)-2-hydroxyethyl]glutarimide, hexachlorobenzene, methyl N-(2,6-dimethylphenyl)-N-(2-furoyl)-DL-alaninate, DL-N-(2,6-dimethylphenyl)-N-(2'-methoxyacetyl)-alanine methyl ester, N-(2,6-dimethylphenyl)-N-chloroacetyl-D,L-2-aminobutyrolactone, DL-N-(2,6-dimethylphenyl)-N-(phenyl-

40 acetyl)alanine methyl ester, 5-methyl-5-vinyl-3-(3,5-dichlorophenyl)-2,4-dioxo-1,3-oxazolidine, 3-(3,5-dichlorophenyl)-5-methyl-5-methoxymethyl-1,3-oxazolidine-2,4-dione, 3-(3,5-dichlorophenyl)-1-iso-propylcarbamoylhydantoin, N-(3,5-dichlorophenyl)-1,2-dimethylcyclopropane-1,2-

45 dicarboximide, 2-cyano-[N-(ethylaminocarbonyl)-2-methoximino]-acetamide, 1-[2-(2,4-dichlorophenyl)pentyl]-1H-1,2,4-triazole, 2,4-difluoro-a-(1H-1,2,4-triazolyl-1-methyl)benzhydryl alcohol,

N-(3-chloro-2,6-dinitro-4-trifluoromethylphenyl)-5-trifluoromethyl-3-chloro-2-aminopyridine, 1-((bis(4-fluorophenyl)methylsilyl)methyl)-1H-1,2,4-triazole,

5 strobilurins, such as methyl E-methoximino-[a-(o-tolyloxy)-o-tolyl]acetate, methyl E-2-{2-[6-(2-cyanophenoxy)pyridimin-4-yl-oxy]phenyl}-3-methoxyacrylate, N-methyl-E-methoximino-[a-(2,5-dimethylphenoxy)-o-tolyl]acetamide.

10 anilinopyrimidines, such as N-(4,6-dimethylpyrimidin-2-yl)-aniline, N-[4-methyl-6-(1-propynyl)pyrimidin-2-yl]aniline, N-(4-methyl-6-cyclopropylpyrimidin-2-yl)aniline.

15 phenylpyrroles, such as 4-(2,2-difluoro-1,3-benzodioxol-4-yl)-pyrrole-3-carbonitrile.

cinnamamides, such as 3-(4-chlorophenyl)-3-(3,4-dimethoxyphenyl)acryloylmorpholide.

20 Example 1

O-cyclopropylmethyl N-phenylacetyl-(2,6-dichlorophenyl)-acetamidoxime (Compound No. 1 from Table 1)

25 a) (2,6-dichlorophenyl)acetamidoxime

15.0 g (81 mmol) of (2,6-dichlorophenyl)acetonitrile in 60 ml of ethanol were admixed with 10.3 g (148 mmol) of hydroxylamine hydrochloride and then with 11.1 g (105 mmol) of sodium carbonate dissolved in 40 ml of water. This mixture was refluxed for 4 h, poured into aqueous sodium dihydrogen phosphate buffer (pH 7-8) and extracted with methylene chloride. The resulting white solid precipitate (14.0 g) was filtered off and dried under reduced pressure. More product (3.1 g) was obtained from the extract after removal of the solvent under reduced pressure. The overall yield was 17.1 g, m.p. 172-173°C.

b) O-cyclopropylmethyl (2,6-dichlorophenyl)acetamidoxime

40 10.0 g (46 mmol) of (2,6-dichlorophenyl)acetamidoxime in 40 ml of dimethylformamide were admixed with 6.5 g (48 mmol) of cyclopropylmethyl bromide. The mixture was cooled to -20°C and admixed dropwise with 5.4 g (48 mmol) of potassium tert-butoxide in 20 ml of dimethylformamide. The mixture was stirred at -20°C for 1 h and then at room temperature overnight, poured into aqueous sodium dihydrogen phosphate buffer (pH 6) and extracted 5 times with diethyl ether. The combined extracts were washed twice

with water and once with saturated sodium chloride solution, dried over sodium sulfate and concentrated under reduced pressure. Yield: 12.3 g of a yellow oil which was reacted further without any further purification.

5

c) O-cyclopropylmethyl N-phenylacetyl-(2,6-dichlorophenyl)-acetamidoxime

5.0 g (18 mmol) of O-cyclopropylmethyl

10 (2,6-dichlorophenyl)acetamidoxime in 40 ml of toluene were heated to 85°C and admixed with 3.9 g (25 mmol) of phenylacetyl chloride. The mixture was heated at 100°C for 5 h, cooled, poured into aqueous sodium hydrogen carbonate solution (pH 7) and extracted three times with toluene. The combined extracts were washed with 15 water, dried over sodium sulfate and concentrated under reduced pressure. The crude product (5.6 g) was purified by silica gel chromatography using cyclohexane/ethyl acetate. M.p. 134-135°C.

Example 2

20

O-cyclopropylmethyl N-phenylacetyl-(2-chloro-6-fluorophenyl)-acetamidoxime (Compound No. 2 from Table 1)

a) (2-chloro-6-fluorophenyl)acetamidoxime

25

10.0 g (59 mmol) of (2-chloro-6-fluorophenyl)acetonitrile in 50 ml of ethanol were admixed with 7.0 g (101 mmol) of hydroxylamine hydrochloride and then with 7.5 g (71 mmol) of sodium carbonate dissolved in 30 ml of water. This mixture was 30 refluxed for 4 h, poured into aqueous sodium dihydrogen phosphate buffer (pH 7.8) and extracted with methylene chloride, and the extract was dried over sodium sulfate. The solvent was removed under reduced pressure, and 4.9 g of product were obtained from the extract. A further 3.7 g precipitated from the aqueous phase.

35 Overall yield: 8.6 g, which were directly reacted further.

b) O-cyclopropylmethyl (2-chloro-6-fluorophenyl)acetamidoxime

4.0 g (20 mmol) of (2-chloro-6-fluorophenyl)acetamidoxime in

40 30 ml of dimethylformamide were admixed with 2.8 g (21 mmol) of cyclopropylmethylbromide. The mixture was cooled to -20°C and admixed dropwise with 2.4 g (21 mmol) of potassium tert-butoxide in 20 ml of dimethylformamide. This mixture was stirred at -20°C for 1 h and then at room temperature overnight, poured into 45 aqueous sodium dihydrogen phosphate buffer (pH 6) and extracted 5 times with diethyl ether. The combined extracts were washed twice with water and once with saturated sodium chloride solution,

dried over sodium sulfate and concentrated under reduced pressure. Yield 4.8 g of a yellow oil which was reacted further without any further purification.

5 c) O-cyclopropylmethyl N-phenylacetyl-(2-chloro-6-fluorophenyl)-acetamidoxime

3.0 g (12 mmol) of O-cyclopropylmethyl (2-chloro-6-fluorophenyl)-acetamidoxime in 30 ml of toluene were heated to 85°C and admixed with 2.5 g (16 mmol) of phenylacetylchloride. The mixture was heated at 100°C for 5 h, cooled, poured into aqueous sodium hydrogen carbonate solution (pH 7) and extracted three times with toluene. The combined extracts were washed with water, dried over sodium sulfate and concentrated under reduced pressure. The crude product (3.8 g) was purified by silica gel chromatography using cyclohexane/ethyl acetate. Yield 1.5 g of m.p. 109-110°C.

Example 3

20 The following compounds were prepared by the methods described in Examples 1 and 2:

	Compound from Table 1	Physical data
25		
	No. 3	m.p. 75-78°C
	No. 5	$^1\text{H-NMR}$ (CDCl_3) δ = 0.17 (m); 0.48 (m); 0.97 (m); 3.56 (s); 3.75 (d); 4.03 (s); 7.10-7.25 (m); 8.23 (s).
30	No. 7	$^1\text{H-NMR}$ (CDCl_3) δ = -0.05 (m); 0.35 (m); 0.79 (m); 3.50 (d); 3.73 (s); 4.32 (s); 7.10-7.45 (m); 8.43 (s).
	No. 23	m.p. 69-72°C
	No. 34	m.p. 94-96°C
	No. 35	m.p. 76-80°C
35	No. 36	m.p. 95-98°C
	No. 37	m.p. 58-61°C
	No. 359	$^1\text{H-NMR}$ (CDCl_3) δ = 0.20 (m); 0.48 (m); 1.00 (m); 1.38 (d); 3.50 (m); 3.78 (d); 4.87 (q); 7.05-7.35 (m); 8.19 (s).
40	No. 374	m.p. 63-65°C

Example 4

Activity against mildew of wheat

5 Leaves of wheat seedlings c.v. "Kanzler" which had been grown in pots were sprayed to run off point with an aqueous preparation of active compound which had been prepared from a stock solution comprising 10% of active compound, 63% of cyclohexanone and 27% of emulsifier, and, 24 hours after the spray coating had dried

10 on, dusted with spores of powdery mildew of wheat (*Erysiphe graminis* forma *specialis tritici*). The test plants were then placed in a greenhouse at 20-24°C and 60-90% relative atmospheric humidity. After 7 days, the extent of the mildew development was determined visually in percent infection of the total leaf area.

15

20	Active compound No. from Table 1	% infection of the leaves after application of an aqueous preparation comprising 16 ppm of active compound
	No. 1	3
	No. 2	3
25	Untreated	95

The plants which had been treated with the active compounds Nos. 1 and 2 of Table 1 showed an infection of only 3%, whereas the untreated plants were infected to 95%.

30 Example 5

Protective activity against cucumber mildew

At the two-leaf stage, leaves of cucumber seedlings c.v. "Chinesische Schlange" which had been grown in pots were sprayed to run off point with an aqueous preparation of active compound which had been prepared from a stock solution comprising 10% of active compound, 63% of cyclohexanone and 27% of emulsifier. 20 hours after the spray coating had dried on, the plants were

35 inoculated with an aqueous spore suspension of cucumber mildew (*Sphaerotheca fuliginea*). The plants were then cultivated in a greenhouse at 20-24°C and 60-80% relative atmospheric humidity for 20 days. The extent of the mildew development was then determined visually in % infection of the total leaf area.

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Active compound No. from Table 1	% infection of the leaves after application of an aqueous preparation comprising 63 ppm of active compound
5 Active compound No. 1	10
Active compound No. 2	10
Untreated	90

10

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We claim:

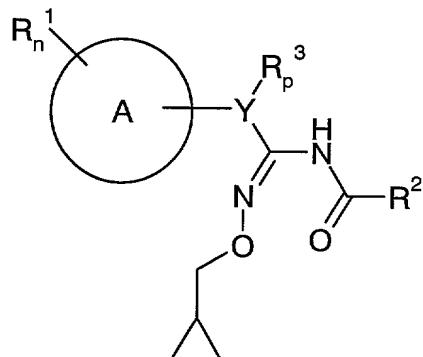
1. A benzamidoxime derivative of the formula I

5

10

15

I



where:

20

A is an aryl or hetaryl radical from the group consisting of phenyl, pyridyl and thieryl;

25

Y is a straight-chain or branched C₁-C₄-alkylene group, where one carbon can be replaced by oxygen, nitrogen or sulfur or by a cyclopropyl group;

30

R_n¹ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy;

35

R² is phenyl-C₁-C₆-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the phenyl ring, or

40

is thietyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the thietyl ring, or

45

is pyrazolyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the pyrazole ring,

R_p^3 are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C_1-C_6 -alkyl, C_1-C_6 -alkoxy, C_1-C_4 -haloalkyl, C_1-C_4 -haloalkoxy, C_1-C_4 -alkylthio, C_1-C_4 -alkoxyalkoxy, C_1-C_6 -alkylcarbonyl;

5

n is 0-5;

p is, depending on the number of free valencies, 0-4.

10 2. A benzamidoxime of the formula I as claimed in claim 1 where A is phenyl.

3. A benzamidoxime of the formula I as claimed in claim 1 where A is pyridyl.

15

4. A benzamidoxime of the formula I as claimed in claim 1 or 2 where Y is a carbon.

5. A benzamidoxime of the formula I as claimed in any of claims 20 1 - 3 where R_n^1 are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C_1-C_6 -alkyl, C_1-C_6 -alkoxy, C_1-C_4 -haloalkyl, C_1-C_4 -haloalkoxy, C_1-C_4 -alkylthio, C_1-C_4 -alkoxyalkoxy.

25 6. A benzamidoxime of the formula I as claimed in any of claims 1 - 4 where

30 R^2 is phenyl- C_1-C_6 -alkyl, which may carry one or more substituents selected from the group consisting of halogen, C_1-C_4 -alkyl, C_1-C_4 -haloalkyl, C_1-C_4 -alkoxy and C_1-C_4 -haloalkoxy on the phenyl ring, or

35 is thienyl- C_1-C_4 -alkyl, which may carry one or more substituents selected from the group consisting of halogen, C_1-C_4 -alkyl, C_1-C_4 -haloalkyl, C_1-C_4 -alkoxy and C_1-C_4 -haloalkoxy on the thienyl ring, or

40 is pyrazolyl- C_1-C_4 -alkyl, which may carry one or more substituents selected from the group consisting of halogen, C_1-C_4 -alkyl, C_1-C_4 -haloalkyl, C_1-C_4 -alkoxy and C_1-C_4 -haloalkoxy on the pyrazole ring.

45 7. A benzamidoxime of the formula I as claimed in any of claims 1 - 5 where R_p^3 are one or two identical or different radicals from the group consisting of: hydrogen, halogen, C_1-C_6 -alkyl,

34

C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy,
C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy.

8. A benzamidoxime of the formula I as claimed in claim 7 where
5 R_p³ are hydrogen or C₁-C₄-alkyl.

9. A benzamidoxime of the formula I as claimed in claim 1 where:

10 A is an aryl or hetaryl radical from the group consisting of phenyl, pyridyl and thieryl;

Y is a carbon;

15 R_n¹ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy;

20 R² is phenyl-C₁-C₆-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the phenyl ring, or

25 is thieryl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the thieryl ring, or

30 is pyrazolyl-C₁-C₄-alkyl, which may carry one or more substituents selected from the group consisting of halogen, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy and C₁-C₄-haloalkoxy on the pyrazole ring,

35 R_p³ are one or two identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy;

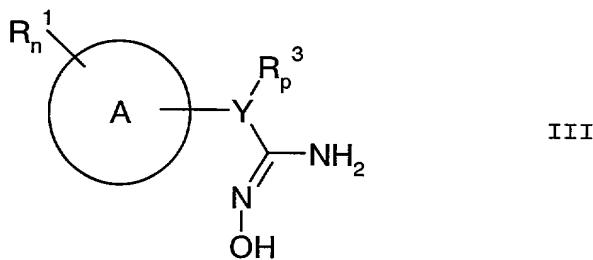
40 n is 0-5;

p is 0-2.

10. An amidoxime of the formula III

35

5

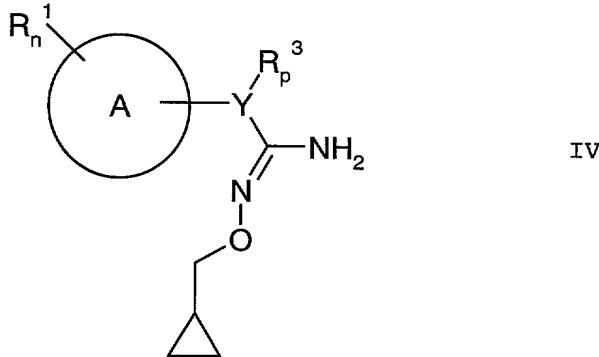


where R_n^1 and R_p^3 are as defined in claim 1.

10

11. An amidoxime derivative of the formula IV

15



20

where R_n^1 and R_p^3 are as defined in claim 1.

12. The use of compounds of the formula III as claimed in claim

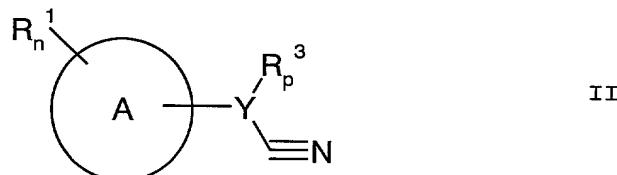
25 10 for preparing benzamidoxime derivatives of the formula I.

13. The use of compounds of the formula IV as claimed in claim 11
for preparing benzamidoxime derivatives of the formula I.

30 14. The use of the benzamidoxime derivatives of the formula I as
claimed in claims 1 - 9 for controlling harmful fungi.

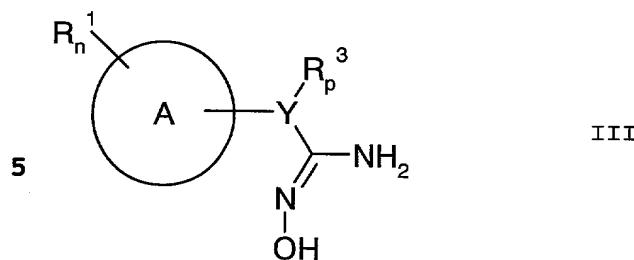
15. A process for preparing the benzamidoxime derivatives of the
formula I as claimed in any of claims 1 - 9, which comprises
35 reacting benzonitriles of the formula II

40

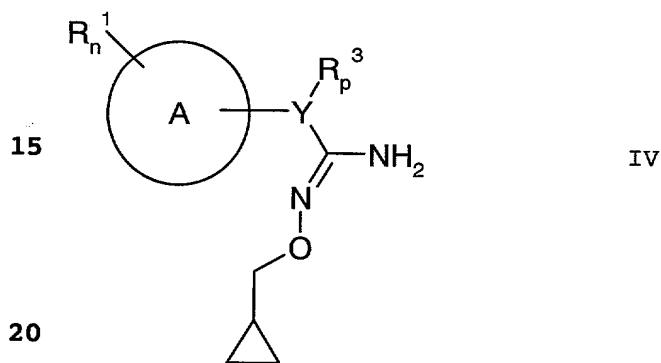


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with hydroxylamine or salts thereof in aqueous solution,
preferably at a pH greater than 8, to give benzamidoximes of
the formula III



10 which are then alkylated using a cyclopropylmethyl halide to give benzamidoximes of the formula IV



which are subsequently converted, using an appropriate acyl halide, into benzamidoxime derivatives of the formula I.

25 16. An agrochemical composition, comprising a fungicidally effective amount of at least one benzamidoxime derivative of the formula I as claimed in claims 1 - 9 and, if appropriate, agriculturally utilizable auxiliaries or additives.

30 17. A method for controlling harmful fungi, which comprises treating the harmful fungi, their habitat or the plants, areas, materials or spaces to be kept free from them with a fungicidally effective amount of a compound of the formula I or a fungicidal composition comprising a benzamidoxime derivative of the formula I as claimed in claim 16.

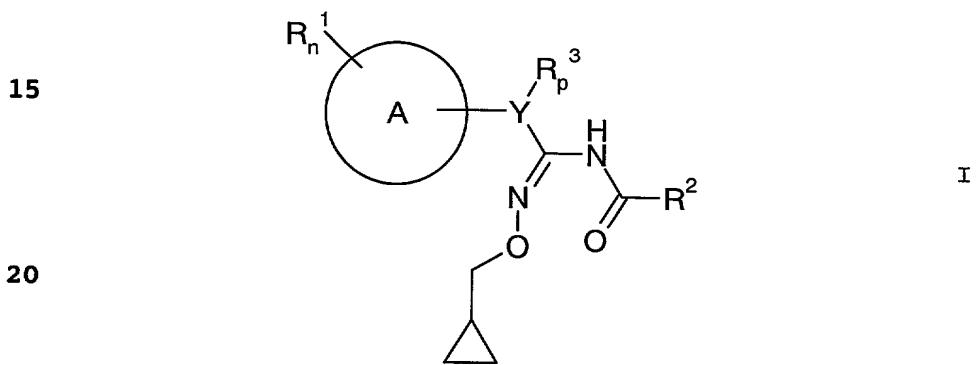
35

Novel benzamidoxime derivatives and intermediates, their preparation and their use as fungicides

5 Abstract

Novel benzamidoxime derivatives, processes and intermediates for their preparation and their use as fungicides are described.

10 In the context of the present invention, benzamidoxime derivatives are compounds of the formula I



25 where:

A is an aryl or hetaryl radical;

30 Y is a straight-chain or branched C₁-C₄-alkylene group, where one carbon can be replaced by oxygen, nitrogen or sulfur or by a cyclopropyl group;

35 R_n¹ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy;

R² is unsubstituted or substituted phenyl-C₁-C₆-alkyl, thiienyl-C₁-C₄-alkyl, or pyrazolyl-C₁-C₄-alkyl,

40 R_p³ are one to five identical or different radicals from the group consisting of: hydrogen, halogen, C₁-C₆-alkyl, C₁-C₆-alkoxy, C₁-C₄-haloalkyl, C₁-C₄-haloalkoxy, C₁-C₄-alkylthio, C₁-C₄-alkoxyalkoxy, C₁-C₆-alkylcarbonyl;

45 n is 0-5;

p is, depending on the number of free valencies, 0-4.

Declaration, Power of Attorney

(9)

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We (I), the undersigned inventor(s), hereby declare(s) that:

My residence, post office address and citizenship are as stated below next to my name,

We (I) believe that we are (I am) the original, first, and joint (sole) inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled

Novel benzyl amidoxime derivatives, intermediate products and method for their production and use as fungicides

the specification of which

is attached hereto.

[] was filed on _____ as

Application Serial No. _____

and amended on _____

[x] was filed as PCT international application

Number PCT/EP00/09744

on October 5, 2000

and was amended under PCT Article 19

on _____ (if applicable).

We (I) hereby state that we (I) have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

We (I) acknowledge the duty to disclose information known to be material to the patentability of this application as defined in Section 1.56 of Title 37 Code of Federal Regulations.

We (I) hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed. Prior Foreign Application(s)

Application No.	Country	Day/Month/Year	Priority Claimed
19948266.7	Germany	06 October 1999	[x] Yes [] No

plskskpc001-25

We (I) hereby claim the benefit under Title 35, United States Codes, § 119(e) of any United States provisional application(s) listed below.

(Application Number)

(Filing Date)

(Application Number)

(Filing Date)

We (I) hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

Application Serial No.

Filing Date

Status (pending, patented, abandoned)

And we (I) hereby appoint Messrs. **HERBERT. B. KEIL**, Registration Number 18,967; and **RUSSEL E. WEINKAUF**, Registration Number 18,495; the address of both being Messrs. Keil & Weinkauf, 1101 Connecticut Ave., N.W., Washington, D.C. 20036 (telephone 202-659-0100), our attorneys, with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to sign the drawings, to receive the patent, and to transact all business in the Patent Office connected therewith.

We (I) declare that all statements made herein of our (my) own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Declaration

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10
Joachim Rheinheimer
NAME OF INVENTOR

Joachim Rheinheimer
Signature of Inventor

Date February 12, 2002

Merziger Str.24
67063 Ludwigshafen
Germany ~~DEX~~
Citizen of: Germany
Post Office Address: same as residence

20
Karl Eicken
NAME OF INVENTOR

Karl Eicken
Signature of Inventor

Date February 12, 2002

Am Hüttenwingert 12
67157 Wachenheim
Germany ~~DEX~~
Citizen of: Germany
Post Office Address: same as residence

30
Ingo Rose
NAME OF INVENTOR

Ingo Rose
Signature of Inventor

Date February 12, 2002

B 5, 10
68159 Mannheim
Germany ~~DEX~~
Citizen of: Germany
Post Office Address: same as residence

40
Thomas Grote
NAME OF INVENTOR

Thomas Grote
Signature of Inventor

Date February 12, 2002

Im Hoehnhausen 18
67157 Wachenheim
Germany ~~DEX~~
Citizen of: Germany
Post Office Address: same as residence

Declaration

Page 4 of 4

0050/050792

Eberhard Ammermann
NAME OF INVENTOR

Eberhard Ammermann
Signature of Inventor

Date February 12, 2002

Von-Gagern-Str.2
64646 Heppenheim
Germany ~~DEX~~
Citizen of: Germany

Post Office Address: same as residence

John-Bryan Speakman
NAME OF INVENTOR

Brian Speakman
Signature of Inventor

Date February 12, 2002

In den Hahndornen 7
67273 Babenheim
Germany ~~DEX~~
Citizen of: Great Britain

Post Office Address: same as residence

Siegfried Strathmann
NAME OF INVENTOR

Siegfried Strathmann
Signature of Inventor

Date February 12, 2002

Donnersbergstr.9
67117 Limburgerhof
Germany ~~DEX~~
Citizen of: Germany

Post Office Address: same as residence

Gisela Lorenz
NAME OF INVENTOR

Gisela Lorenz
Signature of Inventor

Date February 12, 2002

Erlenweg 13
67434 Neustadt
Germany ~~DEX~~
Citizen of: Germany

Post Office Address: same as residence